reason

Free Minds and F[illegible] April 1982/$2.00

REVOLUTION IN CHILE

WE PAY FOR DUDS

How the Military Cheats on Weapons Testing

- Minting Mistakes
- I.D. Entrepreneur
- High-Tech Freeze-Out

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How To Open Your Swiss Bank Account

Next May 15th, 200 fortunate men and women will gather at the Hotel International in Zurich to assure their financial future. Will you be one of them?

Why Zurich? Because when many prudent men and women think about their money today, they "think Switzerland." In the last dozen years, the Swiss franc has soared 150 percent against the dollar. With that rise plus compound interest, if you had deposited *$100,000* in a Swiss bank in 1970, you'd have about *$500,000* today—and not one day of worry about whether your money was safe.

At the 1982 Swiss Money Seminar, 15 experts will show you *why* some of your money belongs in Switzerland, and *how* to transfer it there, legally and privately. Just as important, you'll have the chance to fire questions at the experts. Haven't you asked yourself questions like these?

- How easily and how quickly can I get money out when I want it?
- Can I bank or invest in Switzerland without my family knowing about it? My lawyer? My accountant?
- Exactly what is legal? What is illegal?
- How much is this going to cost me? Is it worth it?
- How do I go about banking or investing in Switzerland? What are the procedures? Is there a lot of red tape?
- How can I do this legally without telling the IRS?
- Most important of all—how do all these Swiss investments fit *my own* financial needs?

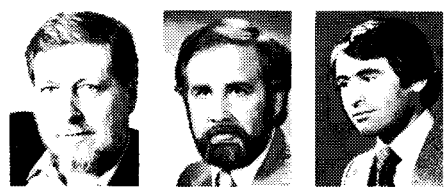
If your questions require longer, more personal discussion, you can meet with one of our experts, or with an official representative of a Swiss bank or financial institution—all in traditional Swiss privacy. In fact, you can, if you wish, take care of your financial arrangements right there.

15 Experts Lead You Through the Swiss "Financial Supermarket"

The choices are so numerous that you MUST discover some that fit your needs. A few of them:

Goldplan Switzerland: 4 scientific methods for automatically accumulating it (and no worry if the government cracks down again on gold owners) • Swiss annuities (the owners laugh at inflation) • How to move money abroad—legally yet secretly • Ways to use Switzerland to save on your taxes • Special situations and private placements: the Swiss often hear about them first, and their clients profit • How to buy stocks and bonds anonymously via your Swiss account * Is Swiss residency for you? The facts. * Swiss franc retirement plans: high-yield, perfectly legal, private— and above all SAFE (unlike Social Security and a host of U.S. pension plans, the Swiss Plans are NOT in trouble) * PLUS—so many more ideas it will take you three full seminar days to explore them all.

The 15 experts are headed by Harry Browne, the prophet who foretold the explosion of gold, silver and the Swiss franc—back in 1969. Browne gives you his *new* projections for the 1980s. John A. Pugsley, author of "Common Sense Economics" and the bestselling "Alpha Strategy." Siegfried Herzog, manager of the famous Ueberseebank, takes the mystery out of Swiss banking. Jurg Lattmann, the insurance specialist, explains the unique virtues of Swiss annuities and endowments. And you'll hear and meet another dozen money masters from Europe and America.



Browne *Pugsley* *Lattmann*

Your Cost: Far Less than You'd Expect

You not only *hear* the 15 experts. You get to question them, and meet them personally. Therefore, you might expect the three-day session to run you $3,000...$5,000...as much as $10,000. The actual cost: hard to believe at $400—and only $300 for anyone you bring.

Better yet, the ENTIRE cost—seminar fee, travel, meals, hotel—meets IRS requirements and is therefore *100 percent tax-deductible.* For most people, this cuts the cost about in half. BONUS: a week in Switzerland at a superb hotel (and Zurich is wonderful in May).

If you wish to attend our optional Vienna Banking and Investing Seminar (see below), the admission fee is an additional $150 for the first person and $125 for each additional person. A complete (Zurich-Vienna) travel and hotel package is available at $85 per person per day, based on double occupancy. Additional air fare for the Vienna option is about $57 per person.

Discount Plus FREE Gift for Early Registration

If we receive your reservation before March 1, you may deduct 5 percent from your seminar fee, and 5 percent for anyone you bring. In addition, we'll send FREE the "Swiss Investment Catalog," which sells for $5.95. Armed with this guide, you will be well prepared for the seminar.

But a word of caution. To preserve the personal "give and take" of the seminar, attendance is limited to 200. Therefore, prompt action will guarantee that you don't get closed out of this unusual opportunity.

How to Register

Just mail your deposit of $100 per person (balance due on April 1) to our cooperating travel service, Meetings Abroad Travel Service, Dept. 2839, 6201 Leesburg Pike, #403, Falls Church, VA 22044. (To charge to your VISA, Master Card or American Express, include the card number, expiration date and your signature.) The deposit is not refundable after April 1. If you register before March, you earn a 5 percent discount per person. Please make your check payable to Meetings Abroad Travel Service. If you prefer to phone in your registrations and credit card deposit, please call the Zurich Seminar Coordinator **toll free** at 800-368-3147, or from Virginia, 703-237-9390, ext. 2839.

Two Attractive Travel Options

1. You can sign up for our 8-day economy travel and hotel package leaving New York, Chicago and other U.S. cities via Swissair 747 Jumbo Jet on Wednesday, May 12 and returning Thursday, May 20. For about $85 a day per person (double occupancy) you get 7 nights at the Hotel International, Zurich; continental breakfasts; 3 lunches; 4 cocktail receptions; the seminar banquet; the Zurich tour; transportation to and from the airport; all baggage handling charges; all taxes and tips. Roundtrip air fare is additional: from New York, as low as $611; from Chicago, as low as $711. (Prices are subject to change after April 1, 1982.)

2. Make your own travel and lodging arrangements and meet us at the Hotel International in Zurich on May 15. The seminar fee includes all talks, panels and question-and-answer sessions. It does not include air fare, lodging, meals or social events. If you make your own arrangements, you are welcome to purchase the "Amenities Package" for all seminar cocktail parties, luncheons and the banquet.

Whichever option you select, please call, **toll free,** for our Zurich Seminar Coordinator at 800-368-3147, ext. 2839, or from Virginia, 703-237-9390, for information or help.

Vienna Banking and Investment Seminar

At the conclusion of the Swiss Money Seminar, there will be an optional Austrian Banking Seminar, co-sponsored by Bankhaus Deak, our cooperating Austrian bank in Vienna.

This one-day seminar will be held on Friday, May 21, 1982. Attendees who sign up for the Austrian Banking Seminar will leave Zurich for Vienna on Thursday, May 20th. The group will leave Vienna for the USA on Monday, May 24. You'll be staying at the luxurious Vienna Hilton.

Austria, Switzerland's neighbor, is a neutral country with an economy, currency and banking system that ranks among the strongest in the world. Bank secrecy is traditional, and exchange regulations liberal. Vienna has achieved the status of an international banking center, offering foreigners a wide range of fir ncial services. *Every investor with assets in Switzerland should investigate the Austrian Alternative.*

Among the topics and speakers are Dr. Nicholas Deak, Dr. Erich Stoeger, manager of Bankhaus Deak, on "Banking and Investing in Austria," Dr. Peter Kisler, Austrian attorney, on "Residence, Citizenship and Company Formation." And four others.

Zurich Seminar Coordinator
c/o Meetings Abroad Travel Service
6201 Leesburg Pike, #403, Dept. 2839
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(800) 368-3147; (703) 237-9390

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NOTEs

Our February article revealing the extent to which Tom Hayden's Campaign for Economic Democracy is dependent on Jane Fonda's businesses (Workout salons, movies, etc.) has created quite a stir. UPI reporter Douglas Dowie contacted CED and Workout, neither of which would deny the accuracy of the article's charges. The resulting UPI story was sent out on January 22 and appeared in numerous newspapers—including a front-page position in Hayden and Fonda's home town of Santa Monica. Los Angeles radio stations KABC and KNX (CBS) both covered the story that day, as well.

Despite the renewal of draft registration, the US Army Adjutant General's office in January requested a copy of Michael Hinz's article on alternatives to the draft (Dec.). I certainly hope they take its suggestions to heart. That same month the American Enterprise Institute informed us they'll be running a 1,000-word summary of Jan Bellamy's "Two Utilities Are Better Than One," our October 1981 cover story, in a forthcoming issue of their *Regulation* magazine. And two items from our February issue have been reprinted in leading newspapers: our Trends item "Message for Uncle Sam: Get Off Your Assets" in the *Sacramento Bee* and the Beilenson and Lynch article, "Should We Spill Blood Over Oil?" in the *Charlotte Observer.*

Some REASON articles continue to have impact long after their publication date. One of these is John Baden and Richard Stroup's July 1981 cover story, "Saving the Wilderness: A Radical Proposal." That article has made quite an impression in Washington, among other places at the Council of Economic Advisers and the Interior Department. While some of what we've heard is still under wraps, we *can* report that coauthor Rick Stroup has accepted an offer to become director of the Office of Policy Analysis at Interior. Congratulations, Rick!

Our Money columnist, Steve Beckner, raised a flurry in January by reporting White House communications director David Gergen's candid doubts about the president's fiscal and monetary policies in a *Baltimore Sun* op-ed piece. Among those remarking on Gergen's indiscretion were syndicated columnists Evans and Novak, the *New York Times,* and the *Wall Street Journal.*

Other REASON people are continuing to make waves. Frequent contributor William D. Burt has a chapter in *Family Choice and Schooling,* just out from Lexington Books. Several years ago Bill was West Coast director of National Taxpayers Union and got involved in the battle over tuition tax credits—the subject of his chapter and several others in the book. William R. Allen, a member of the Foundation's Advisory Board, is the recipient of a 1980 Award for Excellence in Private Enterprise Education from the Freedoms Foundation at Valley Forge. And contributor Peter Samuel is the recipient of the Australian Adam Smith Club's second annual Adam Smith Award for "outstanding service to the free society."

Devotees of economic education will be pleased to learn of several new films from World Research, Inc. (11722 Sorrento Valley Rd., San Diego, CA 92121). One, aimed at elementary and high school students, is called "Chickenomics" and seeks to convey the basics of economics in a humorous format. In a more serious vein, WRI's new "Personalities" series offers video-cassette interviews with economist Walter Williams, legal scholar Bernard Siegan, and other notables. The free-market think tank is at work on another new film, "The Poverty Trap."

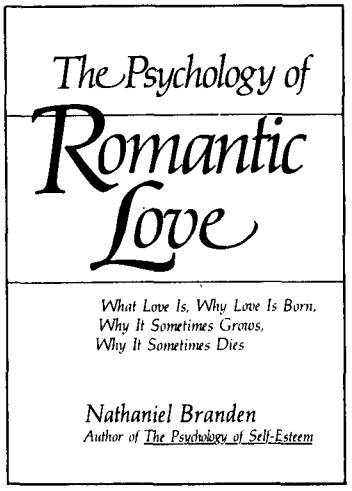
Summer fellowships in economics are available from an organization we can recommend—the American Institute for Economic Research. Open to college seniors and graduate students, the eight-week program will stress monetary theory, methodology, and forecasting. The application deadline is March 31. Write Ms. Tonie Handy, A.I.E.R., Great Barrington, MA 01230.

Atlas Update: Those interested in seeing that Ayn Rand's plan to produce a TV mini-series of *Atlas Shrugged* gets off the ground should contact Atlas Shrugged Project, c/o Jim Blanchard, 4425 W. Napoleon Ave., Metairie, LA 70001.

—R. P.

A NEW CLASSIC BY NATHANIEL BRANDEN

Romantic love," writes psychologist Nathaniel Branden, "is a passionate spiritual-emotional-sexual attachment between a man and a woman that reflects a high regard for the value of each other's person."


The Psychology of
Romantic Love
What Love Is, Why Love Is Born,
Why It Sometimes Grows,
Why It Sometimes Dies
Nathaniel Branden
Author of The Psychology of Self-Esteem

THE PSYCHOLOGY OF ROMANTIC LOVE addresses itself to one of the most important but least understood aspects of our existence: love between a man and a woman—what it is, why it is born, why it sometimes grows, and why it sometimes dies. It is not a sex manual or "how-to" book. Its goal is to make romantic love intelligible—to enrich people's understanding of such love—and to celebrate this ideal as a realistic and worthwhile attainment for men and women of all ages.

The vision of romantic love is often scorned as a neurotic product of modern Western culture. Yet people continue to fall in love. Dr. Branden believes the vision refuses to die because it answers profound human needs. "I am writing from the conviction that romantic love is not a fantasy or aberration but one of the great possibilities of our existence," he says. "But it requires more of us in terms of our personal evolution and maturity than we generally appreciate." In this exciting new book he concludes that romantic love can be a reality for those who understand its nature and are willing to meet its challenges.

"This is a bold, important book. THE PSYCHOLOGY OF ROMANTIC LOVE will do more for lovers than all the sex manuals on the shelves."

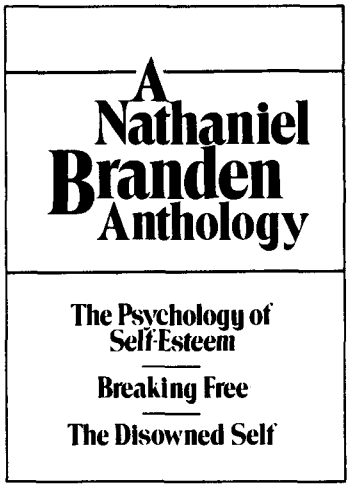
George Leonard,
author of THE ULTIMATE ATHLETE

A Psychology Today Book Club Main Selection
Published in June, 75,000 copies in print.

A Nathaniel Branden Anthology

Now available for the first time in one volume, this anthology of his three previous bestselling works will give his audience—and a whole new one—an opportunity to have the basic material of his thinking. He has also written a special essay for this edition.

The Psychology of Self-Esteem deals with the meaning of self-esteem, the relation of reason and emotion, the nature of free will, and the impact of self-esteem on motivation, work, friendship, sex, and romantic love.



Breaking Free addresses itself to anyone who is dissatisfied with his or her present level of self-understanding and wishes to learn more about the process of personality and psychological development.

The Disowned Self deals with the problem of self-alienation and how people can learn to release buried problems and realize their potential for growth, achievement, and fulfillment.

Nathaniel Branden is a distinguished psychologist in private practice in Los Angeles. He is Executive Director of the Biocentric Institute, through which he gives self-esteem and romantic relationship workshops in major cities throughout the U.S.

Available at your local book store or from:

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___ copies of A NATHANIEL BRANDEN ANTHOLOGY @ $17.50
Please add $1.25 for postage and handling for a single title and $2.25 for both books. California residents add 6% sales tax.

NAME _____

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CITY _____ STATE _____ ZIP _____

Enclosed is my check/money order for $ _____
Money refunded if not fully satisfied.

Stop This Stealing!

The natural right to private property is not protected in these United States. Such is the sorry state of a supposedly free society that uses its alleged freedom to excuse its spending billions on defending itself against communism, a political system that is distinguished, primarily, by its abolition of private property rights. At least the natural right to speak one's mind freely is still relatively safe here. And so, herewith, a response to Ronald Reagan's appointee as IRS commissioner, Roscoe L. Egger, Jr.

Mr. Egger recently sounded off about taxes—that insidious denial of the individual's right to honestly acquired property—before an annual meeting of the National Association of Tax Administrators. His words would put to shame the founding heroes of our republic. "We cannot," he declaimed, "tolerate self-styled saviors of our constitutional system who flaunt their defiance of the law in the name of tax reform and spurious constitutional theories."

With this rhetoric, which could not fail to endear him to his assembled cohorts in the legalized robbery system, Mr. Egger was condemning the many autoworkers in Flint, Michigan, who tried last spring, vainly, to take a stand in defense of private property rights. Admittedly, they didn't put their fight this way. Instead, they probably thought of it simply as trying to hold on to a bit more of what they honestly earned by the sweat of their brows. But the full meaning of the autoworkers' mass protest was nothing less than the meaning of the historic Boston Tea Party—"Stop this stealing of what is ours!"

Frowning upon such a show of principle, Mr. Egger would have us turn to what he and his fellow "tax administrators" charmingly call the law. "California Proposition 13 and similar measures in other states," exhorted the esteemed leader of government's legalized extortion ring, "give ample proof that Americans have legal remedies available when they feel their taxes are too high." Has Mr. Egger ever heard of civil disobedience? of unjust laws and the need at times to defy them in order to prod complacent governments to recognize their perpetration of injustice? of slave rebellions? He would have counseled the foes of slavery to wait for the bright sunny day when the enforcers and sanctioners of lifetime forced labor would willingly, without the force of moral resistance, have relinquished their awesome power!

To *advocate* breaking the law is irresponsible, because one cannot know whether the millions of people who might follow such advice can really afford to confront the powers that be. Yet breaking the law is clearly quite proper—indeed, morally required—at times. The sure examples are those of Nazi Germany and Soviet Russia; and who could morally blame the black and colored people in South Africa who defy the cruelty of apartheid and jump various color lines?

Other cases might be more difficult to cite in simple terms, but any intelligent human being can easily imagine them. Certainly poets, novelists, playwrights, and orators throughout the ages have managed to point to credible human situations in which breaking the law was the only decent thing to do. When the president and most of his staff admit that taxation has gone way beyond even the level that is acceptable in polite, conventional society, it is sheer boorishness to write off tax protestors as antisocial rabble-rousers. Next the members of Poland's Solidarity will be called yippie anarchists.

Mr. Egger tried offering this lame excuse for his harsh words and policies against tax protestors: "To let them get away with it would insult the vast majority of law-abiding taxpayers whose honesty makes our tax system the envy of the world." Balderdash! We of the vast majority pay because we know well and good that we are powerless to wage an effective, winning war against the arms of the State. It would be foolish to try to resist in a piecemeal fashion. Even Soviet citizens know better than to argue with the forces of the Kremlin, which does not make compliance with its tyranny a case of "honesty" worthy of the "envy of the world."

Fear, Mr. Egger, of the brutes whom you send after us when we resist your expropriation of our hard-earned income—that is what leads to the system that may very well, of course, be the envy of bureaucrats across the globe. You have armed yourself very well, with our property. And now, should we get fed up with your practice of devouring us more and more every year, you can, and do, use these arms against us.

What of the *legitimate* questions that can be raised about claims of the impropriety of taxation or the morality of resisting it? For example, *could* society be provided with the necessary legal protection—courts, police, military, etc.—without taxation? Like so many "practical" men, Mr. Egger did not bother with such abstract, philosophical questions. Had he bothered to ask, he would have invited volumes of answers, in the midst of which he might have found out that yes, indeed, solutions to financing public services—bona fide, genuine public services, not the mishmash of special-interest wishes politicians are so eager to lump in with the "public sector"—are available. Such solutions, furthermore, do not breach fundamental principles of morality such as the injunction against theft. (For let us never forget it, taxation *is* theft; only politicians, bureaucrats, and their intellectual apologists like to weasle out of this harsh conclusion.)

Government can indeed pay for itself by charging for its bona fide services—maintenance of contracts, for example, and enforcement of judgments and police protection of individual liberties. There are good discussions of this in the literature of public finance, but one must be better than a hired bully in a grey flannel suit to consider them.

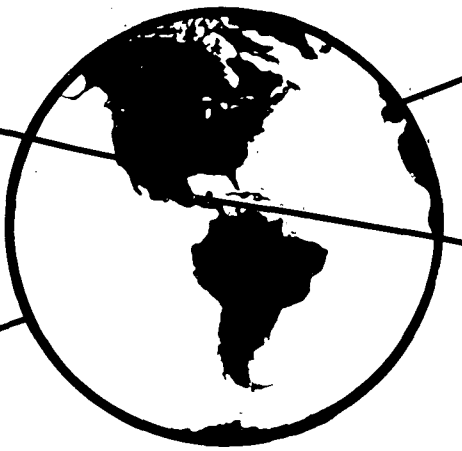
Of course, most of us will pay up. It is better than being in jail. "Your money or your life," says the masked thug, and we will give him our money if we are street-wise. But let us not go around pretending that this is the way a decent society ought to be run.

Tibor R. Machan

WHERE'S THE BEST PLACE TO LIVE?

U.S.A.: Rated #1 on the International Living Quality of Life Index, largely because of the tremendous variety of climate, cultural attractions and life styles. But is the U.S. right for you?

Australia: Australia is the boom country of the 1980's. It is big and open. Miles of deserted beaches. Few people. Vast mineral wealth. Enormous potential for growth. Like California before it was discovered by the rest of the country.



Switzerland: Money. Stability. Prosperity and civility. If you like these things you'll like Switzerland.

Costa Rica: Called the "Switzerland of Central America", Costa Rica is a stable, prosperous country. A person can live well in Costa Rica — with a maid to do the housework — on just about $1500 per month. That's one of the reasons Costa Rica has become home for almost 20,000 Americans.

A World Of Opportunity

The world is alive with opportunity — for travel, adventure, profitable investment, personal growth, learning and pure fun. Many of those opportunities are right here in the U.S. But many more are not.

Take investments, for example, last year the U.S. stock market lost about 10%. But stocks in Sweden gained 31%! Those in Singapore were up 16%. In Japan, stocks rose 13%.

Or Real Estate. While high interest rates and high real estate prices make it increasingly difficult to buy a nice home in the U.S., truly gorgeous homes are available in other countries, at bargain prices. And not just bungalows on the beach. Old castles in Scotland. Stunning modern houses in Tahiti. Lovely stone cottages in Ireland.

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INTERNATIONAL LIVING SAVES YOU MONEY

The fact is, there are many places like Costa Rica, where you can live better for less money than in the U.S. Some of them may not suit your tastes and budget . . . but others will. INTERNATIONAL LIVING will help you find them.

An international lifestyle can save you money on your taxes too. New changes in tax laws allow you to earn up to $75,000 overseas without paying tax to the IRS.

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Letters

Foiling the Rush Hour Remedy

"Rush Hour Remedy" (Jan.) presented facts, figures, problems, and solutions in a very thorough manner. However, I—one of those drivers out there—am not totally convinced by the automatic vehicle identification (AVI) system. One very important problem overlooked was that AVI, like many other mechanically complicated systems, is susceptible to being foiled by people—especially when it comes to saving a buck. Remember what people did to antipollution devices when they first came out? What could be worse is that some electronics wizard will come up with an AAVI (*anti*-AVI) system, whereby the induction circuit is defeated, and market it like the "Fuzzbuster."...

Now, suppose there is a city somewhere that could utilize an AVI system where all technical details *really* are worked out—if that's possible. I'd still have a hard time believing that any such system could work flawlessly without the implementation of police force "reshuffle" during these peak hours....Well, if the cops have to work extra anyway, they may as well *work* and save the taxpayer's money on the "other" scheme.

David J. Yena
Sargent, TX

Preconceptions

I have difficulty understanding the cover story of the December issue ("Strangers in Paradise: Scientific Creationism Exposed"). Does REASON advocate that the State use its powers to force education upon children, many of whose parents demonstrably do not desire such teaching?

Even if I ignore that argument, I detect overt fallacies in Mr. Steiner's logic. For years I have looked askance at both the creationists and the evolutionists, have read literature of both, and have found them both wanting in an adequate approach to the mystery of origins... Steiner's claim that " 'scientific creationism' starts with a conclusion and then engages in apologetics to justify that preconceived conclusion" applies to evolutionists as well as creationists....

W. Alfred Spoor
Houston, TX

In Defense of Reason

I have been reading REASON for many years, and as I read your December article dealing with the creationist versus scientific approach to teaching the development of life on earth, I could anticipate a certain response in the letters column.

A bunch of readers will say that it should all be left to the free market, that the real problem is public education, so why bother with the substantive controversy. The answer to this kind of letter is that REASON, thank goodness, is interested not just in politics but also in other areas of culture, including education. In education it is always appropriate to ask whether something should be included in the curriculum.

Another bunch of people will claim that, when it comes to being a *bona fide* scientific theory, evolutionism is on par with creationism. These readers are willing to engage in a purely pedagogical, or curricular, discussion of the controversy, but they do not take seriously enough the fact that creationism is from the start antiscientific, rejecting the need for a rational, humanly accessible method for answering questions about origins. So even if the scientific status of evolution were as bad as some claim it is, it could never be so bad as creationism.

Of course, some readers will protest that REASON's dedication to approaching all topics rationally is itself a kind of dogmatism. But you can't help everyone.

Salvadore Contille
Brooklyn, NY

Creation Stories

The excellent article on "scientific creationism" in your December issue reminds me that for quite a number of years I accepted the fundamentalist view that creation and evolution are significant religious arguments, without ever

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examining the view rationally. When I did so, it became apparent to me that that view (which many scientifically oriented people accept) was, in itself, a flawed vision of reality....

Clearly the creationists should be opposed in their mad dream of bringing the 14th century to full flower again, both for the good of society and for the sheer good fun of it; but they can be opposed, I believe, in the serene confidence that a rational genie—any rational genie—once out of the bottle cannot be thrust back in. It's like trying to shovel smoke. As intelligent young people reach the age of reason, they will search for a rational explanation of the universe, and they will find one.

The Unitarian Universalists (a rationalist religious denomination) have met the creation/evolution problem—which can be a problem for children, especially somewhat bright children—in a useful way. They have a Sunday school unit, at the fifth- or sixth-grade level, which takes up a dozen or so creation stories, from Babylonian to Navajo, including the Genesis story, and thus offers young people a broader view of the universal hunger for an explanation of "how we got here" and "how the world came to be." The unit also presents the story of creation held by scientists today....Such a "stories of creation" approach should be considered by men of reason battling on that plain "where ignorant armies clash by night."

Jay Chidsey
Green Springs, OH

More Accurate Info

A note with regard to the Health & Welfare column in November (p. 54):

There is sufficient research to suggest that 3 to 10 grams of arginine taken daily might stimulate the growth of the herpes virus in persons who have a latent infection. For the considerable percentage of the population carrying the herpes virus, this dosage is reasonable only if they don't mind setting off an active infection.

L-Cysteine indeed does what the column says. However, it also is a rather powerful chelating agent and can remove from the body valuable minerals such as zinc and copper. Three to 6 grams of L-Cysteine taken daily is a reasonable dose only if one is keeping close track of the levels of these and other minerals in the body.

Fifty mg. of chelated zinc is certainly a reasonable dose. However, this reasonable dose may lower levels of HDL cholesterol (the so-called protective fraction), set off paroxysmal ventricular contractions, and over the long run cause copper-deficiency anemia in some individuals.

Freedom includes the freedom to self-dose or self-medicate with absolutely anything. It also includes the freedom to publish nearly anything, including considerable information in prior Health & Welfare columns which has been both accurate and informative. However, I'm sure that other readers, as well as myself, would like to see a little bit more information about potential side effects of various reasonable dosages included along with the benefits.

Jonathan V. Wright, M.D.
Kent, WA

Health Boost

I greatly appreciate your Health & Welfare column by Sandy Shaw and Durk Pearson. I am a medical student currently and will be receiving my M.D. this year. The research being done by Durk Pearson et al. is fascinating to me, particularly the recent articles concerning antioxidants and the reduction of serum-cholesterol, cancer risk, and the immune system.

I enjoy the column, and I hope you will continue to run it. I am greatly in favor of individuals' taking responsibility for their own health and adjusting their lifestyles accordingly. This does, of course, necessitate a great deal of educa-

(Continued on p. 55)

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Animals, animals...the government never tires when it comes to protecting the furry critters from uncaring humans.

Take the case of the loggerhead turtle—if you can find one. The city of Danville, Virginia, in 1979 reluctantly agreed to the choice given it by the federal Environmental Protection Agency (EPA). Either pay a stiff fine for polluting the air from its coal-burning power plant or sponsor a $10,000 study of the sex life of loggerhead turtles. You see, in lieu of the fine, the EPA said the city must finance an "environmentally significant study of general relevance." The study is now finished, and the conclusion is that there probably are no loggerhead turtles in Virginia.

Danville's city manager says the coal-burning plant has been abandoned and the city now buys its electricity at higher prices. On the turtle study he says: "It enlightens our understanding of the Federal government process."

Danville's mayor was more succinct: "This is the most asinine thing ever to come before this city."

It's really tough to raise a family on $60,662.50 a year, bemoan our overworked and underpaid members of Congress. Rather than vote themselves an out-and-out pay raise in an election year, our statesmen used the back door to lift a 30-year-old $3,000 limitation on living expenses that can be deducted in connection with their work, for having to maintain a residence in the capital and one back home. The net effect of the action pretty well assures that most members of the House and Senate will pay little, if any, federal income taxes this year. And to top that off, the Internal Revenue Service announced it will no longer make out returns for individual taxpayers unless they are blind, illiterate—or members of Congress. Well, as H. L. Mencken observed long ago: "Whenever you hear a man speak of his love for his country, it is a sign that he expects to be paid for it." Or even better, "Democracy is the theory that the common people know what they want, and deserve to get it good and hard."

A major pharmaceutical company has finally realized that bureaucracy is only a game, albeit an expensive and stupid game. To help its employees learn how to comply with Food and Drug Administration rules on manufacturing new drugs, A. H. Robins Co. of Georgia developed a board game, something akin to Monopoly. The device works so well that Robins plans to sell kits to other firms at $180 a copy. The goal is to move your piece around the board within seven years, roughly half the average time it takes the FDA to make a decision on approving a new drug for the American market.

"WHY, YES, I AM AN ECONOMIC FORECASTER. HOW DID YOU GUESS?"

After sucking the lifeblood of the ailing American taxpayer for years, the Equal Employment Opportunity Commission has decided to finally nail Count Dracula in his coffin. Until only a few years ago, the EEOC was seriously reviewing 150 cases in which people claimed they were vampires and were being discriminated against because they were born in Transylvania. Former EEOC vice-chairman Dan Leach says agency staff members were "so mindless and overzealous that instead of immediately tossing the vampires' charges out, they let them get as far as preliminary examinations." But what's going to happen now to all the unemployed living dead? The freeze on civil service hiring has locked them out of the job market.

The theory is that being struck by a car with a chrome bumper is likely to hurt a lot more than being run over by a car with a soft plastic bumper. To prove this compelling hypothesis, the National Highway Transportation Safety Administration is spending $380,000 for a study to see what happens to corpses which are creamed at speeds ranging from 5 to 30 miles an hour—"to simulate the typical pedestrian accident."

Sixteen cadavers, all bequeathed for scientific research, will first be run over and then X-rayed so their injuries can be evaluated. Uncle Jim left his body to science so the government can get the evidence it needs to ban chrome bumpers. If he knew, he'd be spinning in his Edsel.

A dollar isn't worth what it used to be. The Bureau of Engraving and Printing has started offering sixteen one-dollar bills for sale at $20.25. Thirty-two dollar bills go for $38. The bureau hopes to raise funds to refurbish its visitors' display by selling uncut sheets of currency at a profit of about a quarter on each dollar.

The bills in each sheet are genuine currency, so if a collector later becomes hard-pressed for cash he can cut the bills apart and spend them. But smart investors are using the sheets as wallpaper for business offices. As inflation shrinks the value of the dollar, just think of the fortune that can be saved in tax depreciation.

—MARK EDWARD CRANE

The IRS doesn't want you to read this book. So maybe you should.

A few years back, you wouldn't want to meet Paul Strassels. Because if you did, he might be sitting on the other side of the desk, grilling you for his boss, the Internal Revenue Service.

But now he's on your side, and he's written a book to prove it. How often does a book about the IRS make the bestseller lists? This one did — because it takes you *behind the scenes*. . . tells you hundreds of facts about IRS methods and tactics *that they don't want you to find out.*

You get that dreaded form letter: "appear on (date) with your tax records for 1979." Your heart beating much too fast, you make a panicky call to Marvin the Accountant — who calms you a little, and begins to earn the most important fee you'll ever pay him.

Paul Strassels takes you every step of the way through this nightmare — and shows you why it really isn't the end of the world. First you see why the IRS happened to pick your return. You meet Murphy the Classifier, and discover the seven questions he asked himself about your return before he decided to finger you.

Next comes your heavy date with Harry the Auditor. But first, the author sits you down with Marvin for a line-by-line check of your return: what you'll get away with. . . what they'll nail you on. . . above all, how you and Marvin must handle the situation.

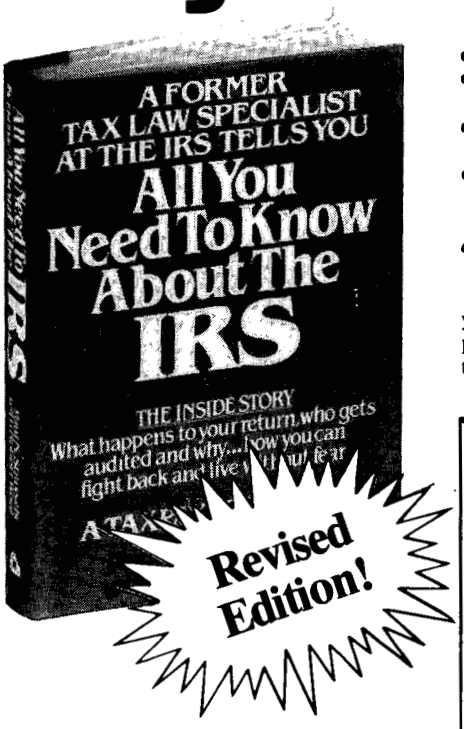
Now you're ready for Harry. You discover how he reads your return — and how he reads *you*. You learn the tricks he uses to trap you. You get 23 rules about how you should behave at the audit.

Paul Strassels can't make this a "fun" experience for you. But at least he makes it bearable. Better — he shows you how to cut your chances of ever having to go through it.

If you're looking for another one of those tax manuals, *don't* buy this book. But if you want to know exactly how the tax collector is thinking, here's a hint of what this former tax man reveals:

- 24 safe deductions.
- Extra income: how much chance is there that Harry will discover it? How about interest and dividends?
- How the IRS computer can tell, almost always, whether you're cheating, and by how much.
- The audit risk in your tax bracket.
- Why your tax preparer could be costing you thousands of extra tax dollars.
- The biggest cheaters, by income category. (Yes, the IRS knows this too.)
- Never mind what the law says — how much time must pass before you can feel pretty safe from a tax audit for a particular year?
- The 18 Danger Zones that can give you trouble on your return. How to handle each one.

Make no mistake, the feds are at war — with you. If you're prudent, you'll seize this chance to penetrate enemy headquarters. If you know how they plan to deal with you, it can only help.



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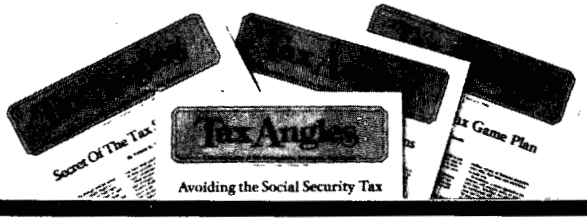

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TRENDS

OIL DECONTROL: THERE IS GOOD NEWS

When oil produced in the United States was fully deregulated in January of last year, the first palpable effect was a predictable increase in the price of petroleum products. Acting in combination with an OPEC price hike, the decontrol of domestic oil fueled a rapid price increase at the pumps: the average retail price of gasoline rose from $1.26 a gallon at the end of 1980 to $1.36 in March of '81 following deregulation. But after the March peak, the price fell: by the end of 1981 it averaged $1.32 a gallon and is expected to keep falling through the first half of this year. Jet fuel, too, peaked in price by March 1981 and then fell, averaging a decrease of 9 cents a gallon since the March high.

The downward stabilization of gasoline prices can be partly attributed to a decrease in the quantity demanded following deregulation—4.2 percent in 1981 and an expected further decline of 1.2 percent this year. The downturning prices are also due to additional oil production following decontrol, which resulted in additional gasoline being produced.

Some of the additional domestic crude was produced by "enhanced recovery": the rising prices made it profitable for oil companies to use comparatively expensive steam, gas, and chemical technology to flush out oil left behind by conventional drilling. It is thus feasible to recover a huge amount of oil that before deregulation was considered too inaccessible—and therefore too costly—to extract. In 1980, only $2.2 billion (just a fraction of the oil industry's exploration and production investment) was spent producing oil with enhanced recovery methods. By 1990, however, the oil industry expects to have spent nearly $40 billion on enhanced recovery to produce 1.4 to 2.5 million barrels of oil per day—a projected one-quarter of all oil produced in the United States at that time.

Decontrol also has played havoc with the synfuels plans so bullishly touted in 1980. The efforts of government-sponsored Synthetic Fuels Corporation to attract private investors now are getting a limp response. The earlier enthusiasm for synthetic fuels and a national synfuels corporation among eager investors—buoyed by surging oil prices due to the Iran-Iraq war—has been replaced by cool skepticism about the business sense of a synthetic fuels industry in light of the current oil surplus and stabilizing prices following deregulation.

PUBLIC HEALTH CARE: PROGNOSIS WORSENS

Symptoms of the unhealthy condition of socialized medicine continue to surface, and two recent loci of the pathology are London and Los Angeles.

With Britain's 35-year-old National Health Service failing to fulfill its promise of free, quality health care for all—630,000 people, for example, are waiting for surgery, with delays of up to two years for some—a private care system is rapidly growing throughout the insular nation. In London, there are now more than a dozen private hospitals, and the number of private hospital beds has increased 20 percent in the last year. A US medical company, American Medical International, plans to open 10 hospitals in the British capital by year's end. A chain of private family doctors' offices has opened its first location, and in the past two years the nation's 12 private health-insurance companies have increased their rolls by one-third, to three million—6 percent of the population.

Major areas of discontent with the national service are its handling of minor surgery, the spartan public-hospital accommodations, and restrictions on the choice of one's doctor. And this dissatisfaction is not limited to the wealthy: a recent survey indicates that 60 percent of the British people favor private medicine, while only 20 percent oppose it. And part of a major trade union's recently won workers' benefits package includes private health insurance.

Across the Atlantic, a socialized medical institution may soon be administered strong medicine for a condition that appears to be otherwise fatal. Rancho Los Amigos Hospital, Los Angeles County's world-renowned rehabilitation center, is facing deep cuts in its taxpayer funding, threatening to put the facility out of operation. The county's Board of Supervisors, in an effort to find ways to save the institution, commissioned John Kasonic of Executive Consulting Group, Inc. (Bellevue, Wash.) to study ways to cut the hospital's costs. Kasonic's recommendation to the board: privatize the hospital, first through an interim board-appointed independent authority, which would subsequently turn the facility entirely over to the private sector.

The hospital's former medical director, Dr. Vernon L. Nickel, has come out in favor of the privatization plan, urging the county to "unchain" the facility and allow it to become self-supporting. Nickel believes that if this isn't done Rancho Los Amigos may be unable to get by on its pared-down budget.

Opponents of the privatization plan fear that if Rancho were made private, the poor and needy would no longer be able to get care at the center, which now charges a flat daily rate of $600. Eighty percent of the hospital's 400 patients are poor. Kasonic, in his plan, recommends that the county negotiate with the proprietors of the would-be private hospital to provide care for the poor, with the county taking responsibility for deciding which of the poor would receive care. That way, the hospital could continue to care for the poor—whose bills would be guaranteed by the county—without having to make the uncomfortable decisions about who gets admitted. Kasonic believes that the hospital could improve efficiency and increase its revenue if freed from the county's bureaucracy.

LAUNCHING A PRIVATE SPACE SHUTTLE

Will the space shuttle be privatized? A company to take over space shuttle operations and marketing has been incorporated and is prepared to invest $1 billion to do just that.

The firm is Space Transportation Co. (STC), of Princeton, New Jersey, a subsidiary of the investment banking firm of William Sword Co. Its founder and president is Klaus Heiss, chairman of the board of Econ, Inc., a Princeton consulting firm. Heiss and Econ played a key role in the configuration studies that finalized the shuttle design in the early 1970s, under contract to NASA.

STC announced its plans in January. What it proposes is to put up $1 billion to build the fifth shuttle orbiter (its procurement by NASA has been in doubt). In return, it would take over marketing the shuttle to commercial and foreign users and reimburse NASA for all direct launch costs of those missions. NASA would continue to maintain the launch pads at its

own expense, as it does for Defense Department missions.

Presidential science advisor George Keyworth has told STC that the proposal "dovetails very well with the Reagan Administration's political and economic philosophy," according to William Sword, Jr., managing director of STC's parent company. Sword says that private enterprise involvement will lead to aggressive marketing of shuttle launch services, rather than "just playing the role of an order taker."

STC is not asking any guaranteed return on its investment and wants to avoid linking up with any of the major aerospace companies (such as Boeing, which has also expressed interest in shuttle operations). Its board includes both investment bankers and a former TWA vice-president.

If its plan is approved, STC expects to begin marketing operations by the end of the year and will make a down payment of $200-$300 million on orbiter 105 by early 1983.

LITTLE GUYS BANK ON DEREGULATION

An Abt Associates study, sponsored by the National Science Foundation, concludes that deregulation of the banking industry would benefit consumers. The study, *Regulation of Consumer Financial Services*, recommends free-market alternatives to state and federal regulation of branch banks, interest rates, credit opportunity, and various banking services. For example, the study shows that banks, unable to attract depositors by offering interest rates higher than those allowed by law, waste money on plush branches and advertising in order to get customers. And financial discrimination, the study suggests, would be eliminated by a more competitive banking market.

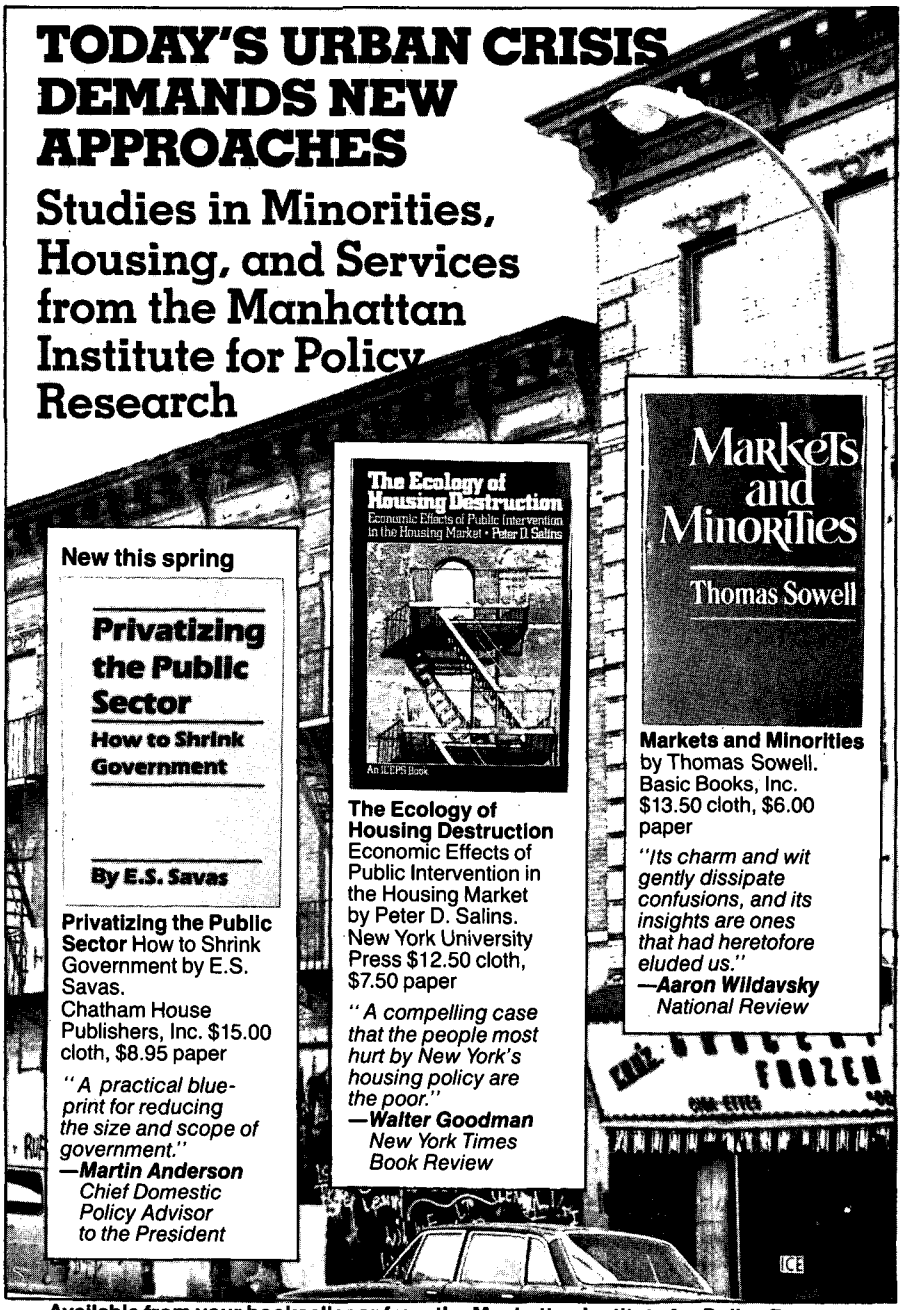
Support for deregulation from within the banking industry itself has traditionally come from large, big-city banks eager for a repeal of the McFadden Act that prohibits interstate branching. Smaller regional banks have up to now resisted deregulation, fearing that they would be squeezed out by rampant interstate branching of the big banks.

With the advent of automated teller machines (ATMs), however, small banks have made an about-face: they are now leading the drive for deregulation that would allow national electronic retail banking. Shared regional and interstate ATM networks have already evolved out of the electronic technology, and a shared national network is likely to emerge later this year; smaller banks can be hooked into a network and thus retain a competitive position even in a national network. Indeed, smaller banks now see great potential for their role in a national ATM network.

The emergence of such a network would be a *de facto* repeal of the McFadden Act, which has already been largely defused by the ATMs. Presently, ATMs on most regional networks can tap into out-of-state bank accounts to withdraw money, transfer funds between accounts, borrow against a line of credit, and, in some cases, perform interstate deposits.

DECONTAMINATING PROFITS

The antinuclear movement seems to go through cycles. It raises an issue and runs with it for awhile, until scientists and engineers catch up with their rhetoric and set the record straight. Thus, we've gone through periods of concern over meltdowns, uranium shortages, and waste disposal. The latest "un-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solved problem" is that of decontaminating and decommissioning reactors that have reached the end of their 30-year useful lives. Charges of huge costs, impossible requirements, and lack of planning have circulated over the past year or so. These too, however, turn out to be unwarranted.

In the first place, the technology is apparently well in hand. While no full-scale, commercial reactor has yet been fully decommissioned, several smaller ones have—and by private-sector companies. Rockwell International's Atomics International Division has decontaminated smaller reactors in Hallam, Nebraska, and Piqua, Ohio. The 40-megawatt Peach Bottom I demonstration reactor in Delta, Pennsylvania, was decommissioned by Catalytic, Inc., a subsidiary of Air Products & Chemicals, Inc. Those are just two of the 20 or so firms with nuclear expertise that are seeking a piece of the nuclear decontamination market. Others include reactor builders such as Bechtel (prime contractor for the Three Mile Island cleanup), Westinghouse, and General Electric.

A study by Battelle Pacific Northwest Laboratory estimates that decommissioning will cost between five and ten percent of a power plant's original construction cost—$50 to $100 million for a $1 billion plant. Over the next 20 years, as reactors built during the 1960s and 1970s reach the end of their useful lives, that works out to a market of $300 to $500 million a year. In addition, there are some 5,000 other radioactive sites that will require some form of decontamination—nuclear subs, uranium mines, and research reactors. Far from being a crisis, the decontamination problem represents a large opportunity for capitalists out to make a buck.

THE BENEFITS OF DEREGULATION MOVE ON

Part of Congress's partial deregulation of the trucking industry ordered in 1980 was directed at the moving industry, and consumers are beginning to enjoy the benefits. For instance, senior citizens who move through the American Red Ball Transit Company get a 5-percent discount; customers who pay in advance get 9 percent off the bill. And North American Van Lines pays its customers $125 a day or 10 percent of the shipping charges—whichever is larger—if a guaranteed shipment is late. Binding cost estimates and guaranteed pick-up, as well as delivery, dates are becoming more common as standard practices.

These new competitive practices are now allowable due to the 1980 congressional orders, which dropped strict requirements to base charges on weight and gave movers more flexibility in setting rates and providing services. In addition, a combination of a weak housing market and a trend among Americans to hold jobs and stay put in a community longer is reducing the number of people moving and putting pressure on firms to compete for customers.

Movers are also taking advantage of the laxer regulatory climate within a sagging household-moving market to expand into new areas of business. Some are considering specialized shipping, concentrating on office equipment, computer supplies, and retail goods, for example. Contract hauling is another area movers are exploring. Many only await a green light from the Interstate Commerce Commission (ICC) before breaking into these fields.

Some moving companies, who were securely entrenched in an industry highly regulated since 1935—with tight controls on competition and rates—are finding the new competitive atmosphere tough and are hurriedly filing numerous appeals with the ICC against what they see as unfair competition and predatory practices of some firms. But the looser rules have sparked the aggressive, competitive spirit of others, and some are making out quite well.

Bekins Company of Los Angeles, for example, has adopted an ambitious marketing plan that has resulted in a 22.7-percent revenue increase in the first three quarters of 1981, a period during which Bekins's five major competitors averaged gains of only 11 percent.

One case provides an object lesson of how competitive practices spread throughout the marketplace to benefit consumers. Allied Van Lines first filed a complaint with the ICC against Bekins's innovative practice of offering its customers full-replacement insurance on goods damaged in transit. Then, when the ICC upheld the practice, Allied, along with other carriers, adopted it as well.

CATCH-UP CLASSES LEAVE STUDENTS BEHIND

Since 1965, when the enactment of Title One of the Elementary and Secondary Education Act gave low-achieving poor children a legal right to supplemental instruction, the number of federal and state requirements imposed on school districts has burgeoned. The intent, of course, has been to improve the child's access to education. But a recent Rand Corporation study has found that for many, the opposite is the case: disadvantaged elementary school students who are pulled out of their regular class for multiple doses of supplemental instruction are both confused by it and left with little time for regular coursework.

Researchers Jackie Kimbrough and Paul Hill report that students receiving aid from more than one state or federal program—such as the bilingual, remedial, reading and math, or migrant programs—are called out of their classes several times a day to attend special "categorical" classes in the areas of their deficiencies. As a result, some students are in their regular classes for only one and a half hours daily; thus, core program teachers are unable to teach these students the state-mandated curriculum. And in some instances, the teaching methods and materials used in the regular and supplemental programs are so incompatible that the confused children are unable to learn in either situation.

Because many grants for other activities are conditional on compliance with these required programs, school districts are forced to find ways to respond to the pressure. But many of the required programs are unfunded or inadequately funded. For example, the federal Education for All Handicapped Children Act establishes a set of comprehensive requirements, but only about 12 percent of the cost of the services required for handicapped children is federally funded. Where this situation occurs, school officials often assign disadvantaged children to well-funded programs rather than to the ones targeted to their deficiencies. Consequently, their special needs are unmet while others who would benefit from the well-funded programs are squeezed out.

One of the more ironic consequences of the disruption of students' regular classes, according to the report, is that "low-achieving minority students in desegregated schools are often segregated in categorical program classes." And since most of these students are eligible for several programs at once, they remain in segregated classes for a large part of the day. In fact, such segregation is most pronounced in schools that use the Emergency School Assistance Act program—which was

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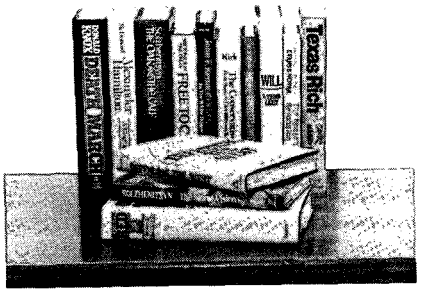

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designed to reduce the harm of segregation and racial isolation.

The Rand study, sponsored by the US Department of Education, surveyed 24 elementary schools in eight districts nationwide. All schools were implementing at least two federal programs, and most offered at least one state program. The study is expected to provide additional ammunition for those who support large-scale cutbacks in federal education programs, on the grounds that those programs are both costly and ineffective.

SMOKING OUT HEALTH DATA

Since the 1960s, the use of wood as a home-heating fuel—in wood-burning stoves and fireplaces—has more than doubled in the United States and may have tripled, according to a November 1981 study by the Resource Policy Center of Dartmouth's Thayer School of Engineering. In addition, report the study's authors, Charles Hewett and William Glidden, Jr., nearly half of all industrial boilers on which construction began in 1980 were to be primarily wood-fueled.

Environmentalists hail this development as a step away from oil and coal and toward greater reliance on renewable energy sources. But several recent studies show that the chemical and particulate emissions produced by burning wood can substantially contribute to the total air pollution in areas where wood stoves and fireplaces are widely used. And, in densely populated areas where much wood is burned, this pollution can present a public health threat.

An October 1981 study by the American Council on Science and Health (ACSH) reports that, in addition to producing such noxious substances as carbon monoxide, polycyclic hydrocarbons, hydrochloric acid, and large amounts of particulate matter, "some of the pollutants released from burning wood are potential carcinogens" such as benzo(a)pyrene (a substance also found in cigarette smoke). The study also reported data from Environmental Protection Agency (EPA) research showing that, "for the same energy output, a wood-burning stove will produce at least 550 times more carbon monoxide than heating with oil, and more than 1,000 times the carbon monoxide produced by heating with gas." And although sulfur-oxides emissions from fossil fuels like coal and oil are greater than those from wood fuel, EPA data show that wood-burning stoves produce "150 times more benzo(a)pyrene and 17 times more particulate matter than oil heat."

Though the extent to which wood-burning pollution poses a health threat is not yet fully clear, the ACSH study reports that in an area of Portland, Oregon, for example, half of the respirable particulates in the air on one day in January 1978 came from residential wood burning. In a study by Brookhaven National Laboratory scientist Frederick Lipfert, data indicate that in some northern cities residential wood burning is a major source of particulate matter, which can cause cancer. (It is estimated that wood now supplies 20 to 25 percent of home heat in New England.) And in Missoula, Montana, the ACSH report notes, wood burning "has occasionally resulted in pollution levels in excess of federal air quality standards."

ANTITRUST ON THE RUN

The conventional "bigness is badness" wisdom in antitrust continues to lose ground (see Trends, Apr. 1981, Oct. 1981). Joining neoliberal economist Lester Thurow in the challenge is long-time Keynesian economist William Baumol.

At the annual convention of the American Economic Association in Washington at year-end, outgoing AEA president Baumol assailed antitrust dogma on the basis of empirical evidence. Markets *can* be free even if only a few firms are active (contrary to the Federal Trade Commission's discredited "concentration" and "shared monopoly" theories), so long as there is free entry *and* free exit.

The relevance of free entry is obvious: if new competitors can always get in, the possibility of their doing so tends to hold down the prices charged by existing firms. But free exit is equally important, explained Baumol. If a new entrant can resell his initial investment without a major loss, then the existing firms must contend with the threat of "hit and run entry." In other words, if the Big Three cereal makers, for example, charge exorbitant prices, new firms can rush in and capitalize on those high prices but get out again safely when the Big Three respond with price cuts. The "hit and run" threat will thus serve to keep the Big Three's prices at competitive levels in the first place.

In the past several years we've seen this theory in action, Baumol explained, in the case of trucking and airlines. In both cases the removal of legal barriers to competition has allowed for free entry. At the same time, because trucks and airliners are highly marketable items, free exit is also ensured. Thus, both industries have shifted from being government-enforced cartels to being competitive industries.

PRIVATE CAMPGROUNDS BLAZING A TRAIL

For many of those millions of Americans who regularly get out their backpacks and sleeping bags to go off and commune with nature, roughing it has become a little too tough. Many campgrounds are becoming dirty and overcrowded, and campground crime—particularly theft and vandalism—is a growing problem.

In response, a private membership-campground industry has emerged, and it's a booming business. The four major firms, all headquartered in the state of Washington—American Campgrounds, Inc., Cardinal's Recreation World, The Great American Adventure, and Thousand Trails, Inc.—together posted more than $90 million in revenue last year.

In contrast to operations such as Kampgrounds of America, Inc., which charges campers rates of between $12 and $15 per night, these new private campground firms offer memberships for a one-time fee, currently ranging between $3,000 and $6,000. (The memberships can be sold or willed three times after the initial purchase.) There is an additional annual dues—now at around $180—which can be raised periodically. For these charges, a member can use any of the company-operated campgrounds on a space-available basis. Most membership campgrounds have 24-hour security guards, and many offer facilities such as saunas, tennis courts, swimming pools, clubhouses, and small grocery stores.

Despite the steep fees, demand for the private campgrounds is growing apace. Thousand Trails, the biggest of the big four, alone has sold 29,000 memberships. When it was started in 1974, a membership cost $200—the fee now is $5,795. It operates 15 campgrounds in California, Nevada, Oregon, Texas, Washington, and Canada and will typically spend $4-$4.5 million developing a single site.

Though the membership firms have not been entirely free of criticism—complaints range from high-pressure sales

tactics and misrepresentation of the availability of the grounds to shoddy construction of the facilities—more and more campers are opting for membership camping: on the West Coast alone, already more than 55,000 families have bought memberships.

MILK CO-OPS SOUR ON FEDERAL AID

Would you believe a proposal to privatize the milk price support program? Not only has such a plan been announced, but the proponent is none other than the president of Dairymen, Inc., the nation's third-largest milk-producer cooperative.

P. L. Robinson made the proposal at the co-op's annual meeting in Louisville last November. As chairman of a national self-help committee of the National Milk Producers Federation, Robinson is concerned about the future of the federal milk price support program—a $2-billion-a-year burden on the taxpayers that has been cut back by Congress under pressure from the Reagan administration. The program has come under increasing public scrutiny because it (1) increases milk prices charged to consumers, (2) increases the federal budget, and (3) leads to the accumulation of huge dairy product surpluses in federal warehouses (the source of all that surplus cheese that was going to be dumped in the ocean a few months ago).

What Robinson has proposed is that dairy farmers themselves take over and run the support program, assessing themselves something like 50 cents per hundredweight to buy up surplus production. Another 5 cents per hundredweight would be used to promote increased dairy product consumption, thereby helping to use up the stored products. The 50-cent charge would provide more than $600 million a year, enough to run a scaled-back version of the present support program.

Whether dairy farmers will agree to give up their place at the federal udder remains to be seen. But Robinson's proposal sounds like a welcome step in the right direction.

LOCAL COMPETITION GETTING THROUGH

Shortly after the January 1981 Federal Communications Commission (FCC) decision to allocate radio frequencies for local communications systems that would bypass local telephone companies, the initial developer of the concept—Xerox—pulled out. Not to worry, though. For in subsequent months 11 other firms applied, among them RCA, MCI, and Satellite Business Systems (SBS, the IBM/Aetna Insurance/Comsat joint venture). Now the FCC's big problem is to figure out what to do, since it allocated only enough spectrum to permit six companies to operate in each city.

RCA, for one, hopes to provide digital electronic message service in 50 metropolitan areas, at a cost of $57 million. It would have its first six systems—in Atlanta, Chicago, Houston, Los Angeles, New York, and San Francisco—up and running within 15 months of FCC approval; the entire network, in seven years.

SBS, meanwhile, is allocating part of the capacity of its second satellite, scheduled to launch next year, to local digital service. The company has also decided to go after the long-distance voice-only market, in addition to long-distance digital service. By this fall it expects to be offering a residential, discount long-distance service in competition with MCI's Execunet and Southern Pacific's

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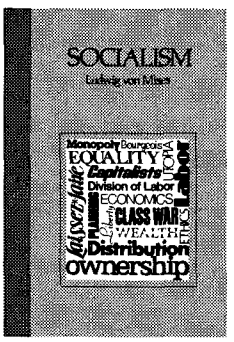

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Sprint. SBS also plans to compete with the Bell System's WATS lines, at 10 to 20 percent lower prices. With its entry into both long-distance voice and local data markets, it's probably just a matter of time until SBS offers local voice service as well, thereby giving local telephone systems their first real competition in 70 years.

DEEP SEA MINERS READY TO DIG

Though no international Law of the Sea treaty has been adopted—the latest round of negotiations began on March 8 in New York—seven international consortiums filed claims in January to explore ocean mine sites; they plan to start mining by 1988. The consortiums—four of which are led by US companies: Kennecott Copper, Lockheed Missiles & Space, Sedco, and US Steel—filed for licenses under laws already enacted by the United States, France, Great Britain, and West Germany.

The United States has already made clear that it will walk out of the current talks if they produce a treaty that is tipped in favor of Third World countries, particularly on the issue of seabed mining (see Trends, Jan.). President Reagan has instructed the US delegation to hold firm on three demanded changes in the draft treaty concerning ocean mining: (1) that production of seabed minerals be unlimited; (2) that private enterprise have free access to seabed resources; and (3) that the power of the countries on the international body governing resource production be commensurate with their political and economic interests and financial contributions. An additional unnegotiable condition is that any amendments to the treaty must be approved by all participating countries, including the United States.

In the event that an acceptable treaty is not achieved, the United States and seven other industrialized nations have adopted a "mini-treaty." This agreement, which was completed in Brussels in January, would govern the member-nations' seabed mining operations that may be started in the absence of an international treaty.

MILESTONES

• *Convention Calls Now at 31.* On January 18, Alaska's House of Representatives voted 27 to 12 to call for a constitutional convention to draft an amendment requiring a balanced federal budget. The state senate passed the measure last June. With the house vote, Alaska became the 31st state to demand the convention, which Congress is required to call if 34—or two-thirds—of the states vote for it.

• *Poker Comes Up Aces.* As of January, poker clubs are legal in Cudahy, California, a suburb of Los Angeles. A December ballot measure to legalize the card parlors received a simple majority vote but failed to get the required two-thirds majority. The five-member city council, however, voted 3 to 2 to approve the clubs anyway. Only two other cities in Los Angeles County allow the card clubs. The poker parlors are required to be licensed—for a fee.

• *Cereal Suit Bowled Down.* The Federal Trade Commission in January dismissed a 10-year-old antitrust suit against the country's three largest cereal makers—Kellogg Company, General Mills, Inc., and General Foods Corporation. This was the government's last antitrust suit based on "shared monopoly": though the FTC did not accuse the three manufacturers of conspiring to fix prices or limit competition, they acted as a monopoly, it said, because they controlled 80 percent of the market for ready-to-eat cereals.

• *Commodities Future.* In an editorial last December, the *Wall Street Journal* suggested that Congress abolish the Commodity Futures Trading Commission. Pointing out how the CFTC is actually injurious to the futures market—specifically in delays resulting from CFTC-required authorization of new contracts—the *Journal* cited the nation's 10 futures exchanges as exemplary in regulating themselves and concluded, "There is . . . no good reason for the government to regulate the futures market." The CFTC will expire this year if Congress does not reauthorize it.

• *Mortgage May Run Out on FHA.* Claiming that private insurers can provide mortgage insurance more quickly and with less bureaucratic busywork than can the Federal Housing Administration, the private mortgage insurance industry is backing a proposal to phase out the FHA over the next five years. Mortgage bankers, real estate brokers, and home builders oppose the plan.

• *Market Manages, Modestly.* The California Energy Commission has recommended that in the event of an oil shortage in the state, the free market should be allowed to allocate resources—unless, however, the shortage reaches 6 percent. At that point, in come the controls.

• *Convenient Revenue.* The socialist government of the Republic of Vanuatu, the South Pacific archipelago nation once known as the New Hebrides, has come up with a source of income: flag-of-convenience shipping. Revenues to the government include registration fees for merchant vessels and an annual cut of the shippers' income, based on tonnage; the shippers get tax benefits and little regulatory pressure. Ironically, flag-of-convenience shipping had been proposed as a means of raising government revenue without taxes by rebel Jimmy Stevens, who, until arrested by the socialist government, had led a movement advocating *laissez-faire* for the islands (see REASON, Sept. 1980).

• *Booze Ban Barred.* A federal court ruled that Oklahoma's ban on advertising liquor on TV is a violation of the First Amendment right of free speech and that it denies equal protection under the law to TV companies. Traditionally, the TV industry has voluntarily limited advertising of alcohol to beer and wine.

• *Taxachussetts Tea Party.* Lower state income taxes may be in the offing for Massachusetts residents this year. Gov. Edward J. King has announced that instead of giving more aid to cities and towns, he may try to reduce the state's income tax. In 1980 Massachusetts became the second state (after California) to pass a property-tax reduction, Proposition 2½. Although local governments complained that severe service cuts would be required, King reports that no city or town other than Boston has resorted to laying off policemen or firemen; cuts in school service have been made, but these, notes King, correspond to declining enrollments.

• *Iowa Lawyers Freed.* The US District Court in southern Iowa has ruled that the state bar's disciplinary code, in prohibiting lawyers from advertising through direct mail and from advertising their fees as "reasonable" or "moderate," violates the First Amendment right of commercial speech.

• *Regulations by the Billions.* According to Murray Wiedenbaum, chairman of the Council of Economic Advisers, the cost of federal regulation to US consumers in 1980 was $126 billion. Wiedenbaum updated the figure from his 1976 study that put the cost at $100 billion, which, he says, was a conservative estimate.

—ROBERT POOLE, JR., AND ERIC MARTI

FIGHTING WITH FAILURES

Why do faulty weapons still pass muster? The Pentagon cheats on the tests. **BY DINA RASOR**

© D. McCullin/Magnum

WE WILL NEVER KNOW how many Americans killed in Vietnam were lost due to enemy fire or to the politics of the Pentagon bureaucracy. We do know that the Army sent soldiers to Vietnam knowing that their most commonly used weapon, the M-16 rifle,

would fail. And the Pentagon sent to Vietnam a tank, the Sheridan M-551, that was giving the Army serious difficulties.

The unreliability of the M-16 rifle had been thoroughly established and documented in field tests at Fort Ord in 1965. Even though the solution was a simple change of powder, the Army sent the unfixed rifle to Vietnam. There it jammed frequently enough in combat to induce soldiers to write to their parents, girlfriends, and members of Congress to complain about their rifles and about their buddies dying with jammed rifles in their hands. After numerous lives were lost because of this failure, Congress held extensive, yet not well publicized, hearings on the tragedy.

Paul Hoven, a helicopter pilot in Vietnam, claims that he "never recalled seeing a captured Viet Cong using an M-16," although the Viet Cong would use all types of old captured World War II rifles. He saw the rifle jam "all the time" in use by his door gunners, the crew covering the sides of the helicopters from attack. He himself used a captured Viet Cong rifle rather than risk his life with a jamming M-16.

If Hoven had been a tank commander in a Sheridan M-551 light tank, he would have felt no safer. According to the first official report on the tank, it had 16 major equipment failures, 123 circuit failures, 41 weapon misfires, 140 ammunition ruptures, and 25 engine replacements. For the tank's main gun, the Army used a "caseless" ammunition that was unsuited to the high humidity in that part of the world, so gunpowder would sprinkle down inside the tank around the soldiers' feet—a problem that could make the tank a rolling bomb during enemy fire.

Like the M-16, the Sheridan was extensively tested before it was sent to Vietnam. The Army Test and Evaluation Command listed numerous combat safety and effectiveness problems, yet it continued to roll off the production lines. The program was termed a "billion dollar boo-boo" by Rep. Samuel Stratton (D—N.Y.) after an intensive investigation in 1969, again prompted by soldiers' complaints from Vietnam.

In the years since the Vietnam war, there have been many in-depth analyses of the "lessons" in foreign policy and national character learned by the United States. Sadly, a lesson of vital importance to our future national security has been overlooked or covered up: why the Vietnam war was full of examples of weapons failures and unrealistic weapon systems that cost in tax money, unfulfilled military missions, and our soldiers' lives.

What is supposed to protect the soldier and the taxpayer from a "dream weapon" that fails miserably in the real world? The Pentagon calls it "operational testing"—a series of realistic battlefield tests meant to weed out turkeys before they reach the soldier in the field. But it was deficiencies in operational testing that kept the Vietnam weapons failures from being caught. In spite of countless lives lost and weeks upon weeks of congressional hearings and repeated critical reports from the General Accounting Office, those deficiencies still exist today.

HOW DO YOU BUY A WEAPON?

As a defense "ombudsman" for a nonprofit taxpayer organization, I have had a first-hand opportunity to see what drives the Pentagon and Congress to continue to buy and use weapons that will fail. I first became acutely aware of this problem while investigating the Army's new main battle tank, the M-1. One could hardly find a more revealing case study of the way operational testing has been so deformed by the Pentagon bureaucracy and porkbarrel pressures that soldiers continue to end up with weapons that will fail them on a battlefield.

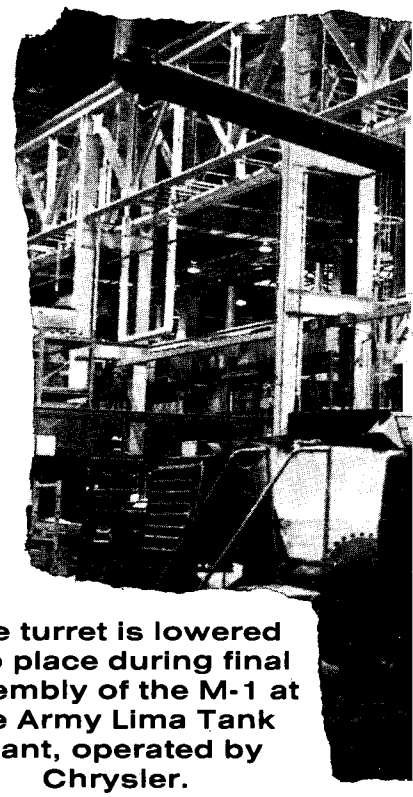
The process the Pentagon uses to procure our weapons is an enormous bureaucratic mass, full of charts, chains of command, and acronyms. But in a simplified form, the basic components of buying a weapon are these:

First, after a service (Army, Navy, or Air Force) decides, with congressional approval, to build a weapon, a program manager is selected. He sets up an office with a staff of perhaps 200 to 500 people in the research and development command of the service to implement the development and production of the new weapon.

At "milestone" points scheduled by each service, it is decided whether or not to continue with the weapon. At Milestone I, the initial decision to begin the program is made. Between Milestone I and II, advanced development begins, with separate components of the weapon being developed at the same time. At Milestone II, the issue is whether to proceed into "full-scale engineering-development" (usually a billion-dollars-plus commitment). Few weapons are ever cancelled once full-scale engineering development is approved. Between Milestone II and III, the prototypes are redesigned and tested to provide the basis for a production decision. At Milestone III, the service decides whether to engage in limited production and further R&D or to proceed to full production of the weapon.

The milestone decisions are made in each service by a council representing several appropriate commands. Those decisions are reviewed by DSARC, the Pentagon's Defense System Acquisition Review Council.

Where does testing of weapons fit in the milestone maze? There are two types of testing, developmental and operational. This is how Russell Murray, former head of Department of Defense Program Analysis and Evaluation described the difference between them to the Senate Governmental Affairs Committee in October 1981:



The turret is lowered into place during final assembly of the M-1 at the Army Lima Tank Plant, operated by Chrysler.

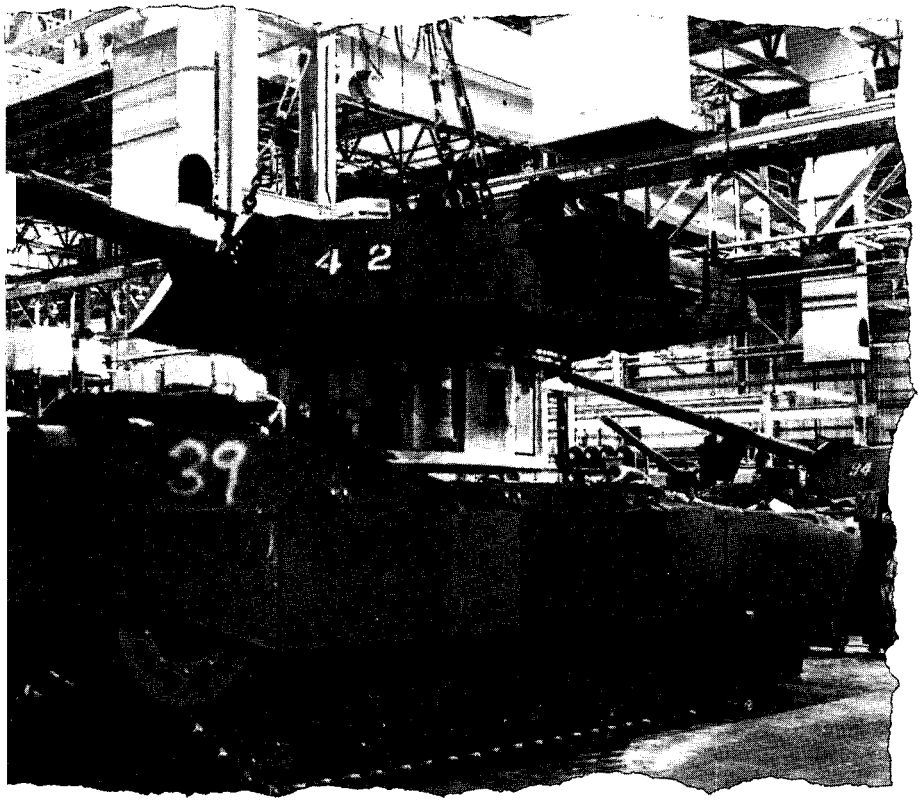
The object of developmental testing is to find out whether a new weapon meets its technical specifications. The object of operational testing is to find out if the weapon—even if it does meet its specs [specifications]—will really be useful in combat.

Developmental testing is conducted by highly trained scientists, technicians, and specialists under tightly controlled, laboratory-like conditions. Operational testing is conducted out in the field by run-of-the-mill servicemen under conditions simulating wartime as closely as possible.

So it is the operational tests that are supposed to protect the soldier from exotic-weapon nightmares. After Milestone II and the full-scale engineering decision, operational testing should be more important than developmental testing and

should be one of the major factors in any production decisions.

But when we move out of the ideal world of chains of command and reporting channels and decision schedules, we find that the system doesn't work as it's supposed to. In the real world of politics and bureaucracy and porkbarrel, it is doing no better than it did with the Vietnam era's M-16 and Sheridan tank. The system is still promoting expensive and ineffective weapons at the expense of our soldiers.



David Hackworth, a former full colonel in the Army who served in Vietnam and was considered one of the Army's top counterinsurgency experts, recently wrote in the *Washington Post* of this new generation of weapons:

My bet, unless cooler heads prevail, is that during the next five years America will spend $1.5 trillion replacing Vietnam era junk with a new generation of junk. It will be more wonder junk—the latest marvels of the dreamers and schemers. The kind of junk that the military has been saddled with since the end of World War II. . . . As Defense Secretary Caspar Weinberger ponders such difficult problems as the B-1 bomber program versus the Stealth and the $75 billion MX missile scheme, I would like to repeat the words of a country boy corporal when he first saw Taylor's incredibly expensive Davey Crockett nuclear rifle: "Sir, that thing just won't work on the battlefield." A few years later, of course, it was returned to weapon wonderland with thousands of other harebrained, half-baked flops. Luckily it came between wars and nobody was hurt except the taxpayer who paid millions for it.

Included in this new generation of weapons is the Army's M-1 Abrams tank—and we're not talking millions, but billions, of taxpayers' money. From January 1980 to January 1981 alone, the price of the tank, which has a nine-year history of cost overruns, rose from $1.5 million per tank to $2.5 million per tank—a million-dollar jump per unit in just one year. The cost of the tank is now around $2.6 million per copy—and growing. So to buy the planned 7,058 of the new wonder tank, being built by the Chrysler Corporation, the taxpayer will shell out at least $18 billion before the Army is through.

The M-1 tank program caught my eye early in 1981 because of its dramatic increase in price. Although a new tank may not be as glamorous an item to buy as a new jet or missile, several military sources have impressed upon me that it could well prove to be a more decisive factor in any war in the near-term future (although you will never get the Air Force to admit that). While many different aspects of the buying of the M-1 tank are open to criticism, the way it was tested and the way the test results were reported to Congress are dramatic illustrations of what is wrong with our testing and procurement bureaucracies in the Pentagon.

WHAT'S IN A TANK?

Known until recently under its experimental designation, the XM-1, the M-1 tank is the Army's third attempt in the past 15 years to build a new tank. Congress had turned down two previous attempts, the MBT-70 and the XM-803, as too costly and too complex and too failure-prone. So the Army's technical reputation was at stake when the M-1 program was formally begun in November 1972.

The M-1 has many new "wonder" features that the Army claims improve significantly on the current M-60 series' survivability, effectiveness, and mobility. These features include new "magic armor," called Chobham armor, made of a classified superalloy reinforced with fiberglass; "fire-resistant" hydraulic fluid; and a fire-detection and -suppression system that is supposed to put out fires in the tank, including the engine, automatically. Its laser range finder tells the gunner instantaneously how far away an enemy target is, and its thermal imaging system assists targeting in darkness, smoke, and dust. The firing system is computerized, and, to improve shoot-on-the-move accuracy, an elaborate stabilization system keeps the tank turret pointed at the target when the tank is rolling. Although the tank weighs in at 60-plus tons, its 1,500-horsepower gas turbine engine (similar to that in an airplane) allows it to attain a speed of 45 miles per hour on a flat road.

All these items have helped to push up the program unit cost of the M-1 to three times that of our standard M-60A1s. But what we're getting, says the Army, is the largest, fastest, and best tank in the world, crucial in any attempt to meet the "projected Soviet threat."

Do the complex new features improve battlefield effectiveness? In June 1981, six NATO countries held a "tank olympics" in West Germany. The Americans' performance was feared by competitors because their M-60A3 tanks were outfitted with a thermal imaging device and a laser range finder similar to the new equipment in the M-1. The English also entered their tank with a laser range finder.

None of these advanced devices was included on the German-made Leopard IA4 and IA3 tanks entered by the Germans and the Belgians. The Germans, who have won these contests in the past, said they placed emphasis on training and tactics—and they won again in this contest, with the Belgians second and the Americans third. As *Defense Week*

reported: "The competition is a test of marksmanship, yet the laser rangefinder in the U.S. and British tanks seemed to help them little. 'The optical rangefinder is better,' asserts a German tank commander."

So it is important to realize that the complex new features do not necessarily increase effectiveness in a real match and under high pressure. In this case, tactics and training won over new electronics systems. Furthermore, these advanced technologies increase maintenance and spare-parts headaches and decrease the percentage of weapons ready to fight. Keep this in mind as we go into the details of the M-1 tests.

If you strip away all the fancy additions and the computer-age refinements, you come down to a very few basic characteristics of a useful tank. First and foremost among these is the ability to move immediately and quickly at all times. This, in turn, requires that the tank run consistently and reliably under adverse combat conditions with few breakdowns. When the tank does break down, it must be easy to fix quickly. The Army calls these characteristics RAM-D (reliability, availability, maintainability, and durability). The RAM-D requirements for the M-1 have caused the Army a lot of grief, but they could also mean life or death to the soldier in the battlefield.

In Operational Test I (OT I) on prototype tanks in 1977, the Army found that the M-1 was having a lot of trouble with its RAM-D requirements. As a result of congressional pressure, continuations of OT I in 1978 and 1979 stressed RAM-D, and the Army extended OT II to check prescribed fixes for the RAM-D problems. Looking into this is where I ran into a key problem with our weapons procurement: institutions that begin to deform test data before they are transmitted to decisionmakers in the services, the Pentagon, and Congress.

GRADE INFLATION

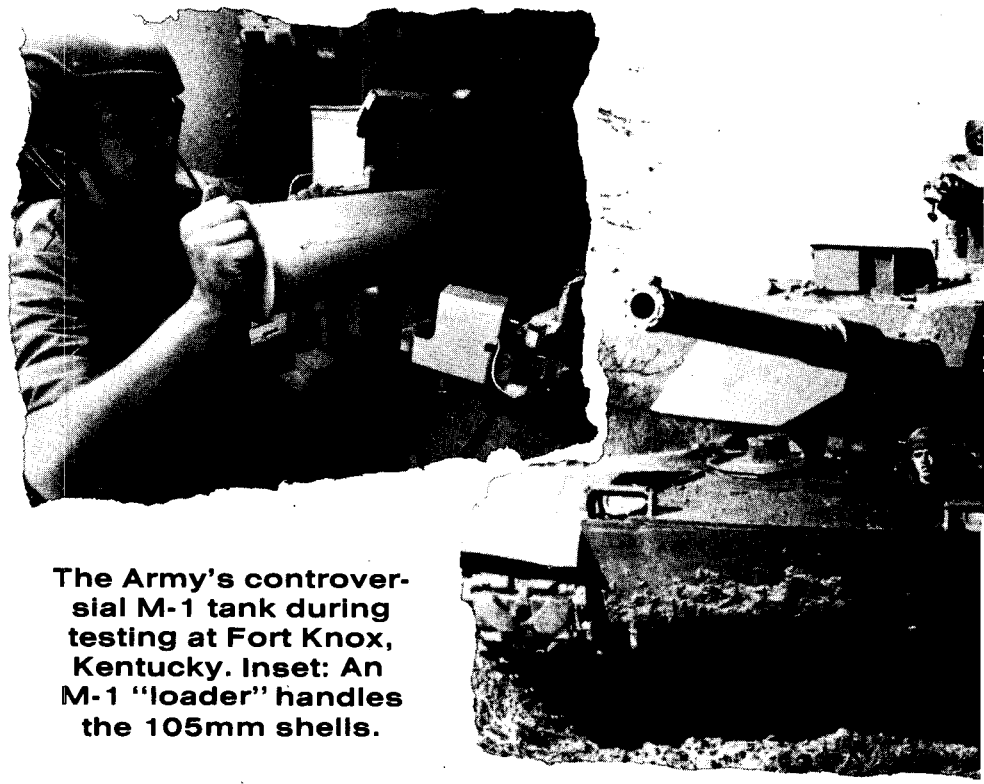
In April 1980 the Army issued a report on the final phase of OT II testing of the M-1 at Fort Knox, Kentucky, in late 1979. When you glance through the executive summary, the tank appears to have been doing quite well. However, the data and comments in the rest of the thick report are a cry for help about a weapon system with serious problems.

The total mileage for the test was 16,070.4 miles, racked up by three tanks. During the testing period, 1,007 maintenance actions were recorded. Taken in raw form this would mean that the tank had a problem approximately every 16 miles. Of course, it is reasonable to conclude that at least some of these maintenance actions, which can range from changing a light bulb to replacing an engine, were not occasioned by major problems that would be serious in combat.

The Army, however, takes this logic far beyond the reaches of reality. In interpreting the raw data from the Fort Knox tests, the Army's "scoring conference," a group of senior officers and civilians from various commands, threw out *all but 171* of the 1,007 maintenance actions. This made the tank have a "chargeable" maintenance failure every *93.97* miles for the Army's definition called "system reliability," or, as the Army says, 93.97 mean miles between failures—MMBF. It just happens that the goal the Army had set for itself for this point in the tank's development was 90 miles between failures. (Note: the Army has another mission criterion, called "combat mission reliability," and in grading the tank in this area the scoring conference threw out all but *56.2* of the 1,007 maintenance actions and had the tank going 285.95 MMBF versus a required 272 MMBF).

When I saw these numbers in the OT II report, I thought that perhaps the scoring conference knew something about the tank of which I was unaware. But as I flipped through the computer printout of the failure log, I noticed that the operational test director (the officer out in the field directing the test of the tank) had also noted which tank failures required *immediate* maintenance so as to ward off much worse trouble. He did record these failures, and when I divided his number into the 16,000 miles of driving covered in the test, I found that the M-1 failed seriously every 34 miles.

The Army, of course, was not happy when I pointed out to members of the press, and they reported, that the tank was really failing every 34 miles, instead of the 93.97 miles claimed by the Army's scoring conference. But I found that I was not the first person to catch such "grade inflation" by a scoring conference.



The Army's controversial M-1 tank during testing at Fort Knox, Kentucky. Inset: An M-1 "loader" handles the 105mm shells.

In April 1980 hearings before the Defense Subcommittee of the House Appropriations Committee, Rep. Jack Edwards (R-Ala.) had been disturbed by "discounted" failures of the power train (the engine, transmission, and final drive) in the first phase of the OT II testing. During the hearing, Congressman Edwards handed a list of recorded but discounted failures to Army Gen. Donald R. Keith, who was explaining to the committee the M-1's progress:

(a) June 27, 1979, engine no. 47, catastrophic failure—discounted.
(b) August 13, 1979, engine No. 50, catastrophic failure—discounted.
(c) August 23, 1979, engine No. 33, major failure—discounted.
(d) September 26, 1979, engine No. 51, major failure—discounted.
(e) July 6, 1979, transmission No. 27, catastrophic failure—partially dis-

counted.
(f) July 5, 1979, transmission No. 21, catastrophic failure—discounted.
(g) August 27, 1979, transmission No. 17, catastrophic failure—partially discounted.

General Keith was not prepared to give Mr. Edwards an explanation during the

hearings but later submitted to the committee the following:

That is correct, these failures were discounted by both the Scoring and Assessment Conferences. Remember that our objective is to determine the inherent durability of the power train itself when it is operated and maintained properly. *Other components which cause the power train to fail as a result of their own failure are not charged against the power train. Instead, these other components are assessed in accordance with the XM1 reliability scoring criteria. . . . Although these failures were discounted, corrective action was taken in every case through either a hardware or procedural change to preclude recurrence. In those instances where partial discounting was indicated, changes had been made and sufficient test miles had been accumulated on the new item to show that the problem had been partially corrected. In the case of the transmission (#27) with the thin wall casting, checks of production castings demonstrated that there were no recurrences. So, the bottom line is this:* only inherent design faults are charged against power train durability, *but corrective action is taken to preclude recurrence of all pattern type failures. [Emphasis added]*

General Keith claims that the Army was trying to test only the *inherent* design problems of the power train. But remember, that is the purpose of *developmental* testing. In OT II the Army was well into *operational* testing that is supposed to assess the tank, warts and all, in a combat-like environment. The soldier under enemy fire is not going to care whether a catastrophic failure in his tank was caused by what General Keith calls an "inherent design fault" or by what a scoring conference thinks is a "nonchargeable" incident. In either case, he may well be dead.

Even after invoking the help of the scoring conference to improve the reported power-train durability, the Army fell way below its own requirement. The *Army* specification was that 50 percent of the tanks go 4,000 miles without overhauling any portion of the power train. At the end of OT II, only 22 percent of the tanks could do so—this figure was without the failures Congressman Edwards had asked about.

Later tests would show that the "corrective action" emphasized by General Keith did not improve the power-train durability. The probability of operating for 4,000 miles without an overhaul actually went down during the first part of Operational Test III. And in the final results of OT III, the power-train durability figure was 15 percent after scoring.

As for system reliability, the Army's reporting of OT III Fort Knox tests shows the same grade inflation that I'd found in earlier operational testing. This time, the scoring conference rated the M-1 tank at 160 mean miles between system failures, up from 93.97. But when I went through the OT III failure log and applied the OT II test director's immediacy criterion, I found that the tank's more realistically assessed MMBF had only improved *from 34 to 43 miles.*

In a report on testing of the M-1 released in January 1982, after I had done my own investigation of OT III results, the General Accounting Office levels the same charge against Army grading of the M-1:

. . . the Army's statistics mask the fact that the M1 sustained many component and part failures that did not figure in the Army's scoring. . . . However, statistics developed by the Army which measured mean miles traveled between what the Army terms "essential maintenance". . . showed the tanks traveling 48 mean miles at Fort Knox [OT III] and 43 mean miles at Aberdeen [DT III] between essential maintenance demands. . . . These scores, however, did not figure in the official calculations.

As the GAO concluded:

This [the Army's actual] scoring methodology may be appropriate for measuring whether or not the contractor has met hardware design requirements. In our opinion, it does not realistically assess the tank's reliability or maintainability in the hands of soldiers.

TESTING BIAS

Helping new weapons to make the grade by inflating test scores is one reason ineffective weapons make their way into soldiers' hands. My investigations have led me to believe that inadequate testing—testing that is biased in favor of the new weapons—is another key factor.

For example, operational testing is supposed to be the one way to make sure an unrealistic and inoperable weapon system does not reach the battlefield. To accomplish this, it is vital that the weapon be maintained and operated by the same average personnel and soldiers who will take the weapon into battle. Conversely, "babying" their exotic weapons through operational testing is another way the armed services can cover up battlefield weaknesses.

Maj. Gen. Richard Lawrence was responsible for the last phase of the M-1's OT III testing at Fort Hood, Texas. In March 1981 he told the House Armed Services Committee that "crews and unit mechanics are supporting the system as they would in combat, and they are doing it exceptionally well."

While this operational testing at Fort Hood was in train, I was invited by Sen. Ted Stevens (R-Alaska), chairman of the Defense Subcommittee of the Senate Appropriations Committee, to accompany him to Texas to review the M-1's performance. Our entourage included three senators, four Senate staff members, and myself. Instead of just watching the M-1 perform, we all had a chance to drive the standard M-60A1 tank as well as the M-1 tank, compare the gun stations of the two, and fire the M-1's main gun.

Although this public relations show was carefully staged, I did manage to talk to two tank commanders as we drove the tank. One of them asked where I had gone to college and surprised me by bragging about having graduated from an Ivy League school. Later, the other tank commander also told me that he had graduated from a large eastern university. These are hardly typical of Army tank commanders in the field, particularly since four of the five com-

manders in every tank platoon are supposed to be sergeants, not officers.

Later in the tour of the M-1 facilities, we were taken to the maintenance depot. Although several of the mechanics were quite young, I was struck by the age of the man who showed us how the Army tests the tank's electronic components. He was easily over 45 years of age and not in military uniform. Although I could not tell whether he was a Chrysler contract employee (General Lawrence insisted no contractor personnel were involved at direct support levels), he certainly was not the type of man one would expect out in the field in a wartime situation.

It would not be the first time overly qualified operators and maintenance crews were used in operational testing of new weapons. The General Accounting Office (GAO) has caught the Air Force doing it, too. In a June 1978 report to Congress, the GAO charged that

Air Force systems are not always operated and maintained during IOT&E [initial operational test and evaluation] by personnel with qualifications similar to those who would operate and maintain the systems after they are deployed. In many cases, contractor personnel perform much of the required maintenance.

Clearly above average Strategic Air Command pilots (graduates of test pilot school) were used during the B-1 test program. Pilots used for the A-10 test program were considered to be more qualified than the average Tactical Air Command pilot. . . .

Service maintenance personnel. . . were generally very high caliber with considerable experience working in their specialty area. They were usually much more highly qualified than personnel who will maintain the system after it is deployed.

The GAO concluded that, because of these and other testing deficiencies, "operational test results might not adequately reflect the performance, maintainability, and readiness of the systems in a realistic operational environment."

During Operational Test I (OT I) of the M-1 tank, the Army did do some testing that would be useful in seeing whether it would be more reliable on the battlefield than the standard M-60A1—they tested the tanks side-by-side. This is perhaps one of the best ways to find out whether a new system is worth buying or whether you would be better off modifying the old system.

The only problem is that the Army did not continue side-by-side testing throughout the development of the tank program. The following numbers may tell you why. In OT I at Fort Bliss, Texas, during 1977, driving over the same roads and using the same scoring conference measuring "system reliability," the M-60A1 went 493 mean miles between failures (MMBF) compared to 77 MMBF for the M-1. The Army's discontinuation of comparative testing again skewed the results in favor of the new weapon.

A few years later the Army's Logistics Evaluation Agency looked back through M-60A2 testing records, to see how the M-1's performance was stacking up. As noted in the 1979 logistics report, which I obtained by a Freedom of Information Act request:

A current comparison shows the M-60A2 tank was tested (engineering test/service test (ET/ST)) for a total of 26,667 miles and 622 performance maintenance reports were written. At approximately the equivalent XM1 test mileage (21,423), 1,752 performance reports have been submitted or about 3½ times the M60A2 incidents. *[Emphasis added]*

To place this in perspective, the M-60A2 was by far the most complex model of the M-60 series but significantly less "advanced" than the M-1. It has been widely recognized as a disastrous failure, so disastrous that all of the Army's 750 M-60A2s have been recalled from Europe. Despite the fact that the M-1 needed maintenance 3.5 times as often as the unacceptable M-60A2, the Army continued to push the M-1 tank program forward with unrealistic optimism and continued to praise the tank at every milestone and every attempted congressional review.

REPORT CARD MANEUVERS

How much of the bad news discovered during operational testing reaches Pentagon decisionmakers and Congress? It is very hard to find out how much is transmitted during the closed-door meetings of the Pentagon's Defense System Acquisition Review Council that reviews each service's milestone decisions. But it is not hard to see that the promoters of the weapon system—the program manager, the research and development factions, and even the services themselves—are constantly trying to turn in to Congress glowing report cards that obscure bad marks in "battlefield" testing.

I have observed first-hand the elaborate effort the Army has made to minimize glaring faults of the M-1. Important shortcomings of the tank were not reaching Congress through hearing testimony or through the congressional staffs and especially not during congressional tours to review the weapon system.

One of the standard reporting-to-Congress techniques was demonstrated during hearings before the House Armed Services Committee on March 18, 1981. Maj. Gen. Duard Ball, program manager for the M-1 tank, told the committee that the power-train durability number had reached 30 percent—even though it had recently slipped from 22 percent to 19 percent, as Maj. Gen. Louis Wagner, commanding general of the US Army Armor Center at Fort Knox, *had conceded to the committee earlier the same day.*

While General Wagner was talking about the durability figure in operational testing, General Ball was using a figure that combined operational and developmental testing—although he didn't mention that to the committee. Since developmental testing is done by scientists in ideal conditions, the numbers from developmental testing are usually higher. They are often combined with operational testing results to pull up bad "battlefield" scores.

The General Accounting Office (GAO) has caught the Navy glossing over weapons problems in the same way. In a 1979 report to Congress, "Need for More Accurate Weapon System Test Results to Be Reported to the Congress," the GAO found that on a Congressional Data Sheet (a congressionally mandated report card to Congress) for the Major Caliber Lightweight Gun System, the Navy had also combined developmental testing and operational testing—and had put the combined results under the heading "operational testing" with no qualifying statements. The GAO showed with a chart (see box, p. 25) how misleading type of reporting is to members of Congress trying to decide whether to vote to buy the weapon. In the same report, the GAO revealed that misleading report cards had been sent to Congress for eight other Navy or Air Force weapon systems.

On November 5, 1981, Gen. John W. Vessey, vice-chief of staff of the Army, gave the House Armed Services Committee the final Army picture of the tank's RAM-D testing just after the M-1's full-production decision. Although he told the committee that the numbers he presented were based on combined operational and developmental test scores, he did not give any hint of the relative contribution of each.

Nor did Vessey mention that the developmental scores were not actual test results but "adjusted" results. The chart on page 25, reproduced from a summer 1981 internal but unclassified Army briefing that was leaked to me, reveals how important this adjustment was in helping the Army "meet" its RAM-D requirements. The creative "adjustment"

referred to is to assume away any failure for which some engineer has subsequently proposed a fix, whether or not the fix has been installed.

Even after adjustments for such fixes, the M-1's crucial power-train durability requirement had still not been met. Although General Vessey admitted this to the committee, he did not give any number. In the final phase of operational testing, it was 15 percent, compared to a *50 percent* requirement.

MISLEADING REPORT CARDS

A GAO table showed actual test results versus the Navy's reported results:

OBJECTIVE	CHARACTERISTIC	DEMONSTRATED PERFORMANCE ACCORDING TO THE MOST RECENT: OPERATIONAL TEST REPORT (Feb. 1977)	CONGRESSIONAL DATA SHEET (Jan. 1978)
300 *rounds*	*Mean rounds between failure (overall)*	214 *rounds*	305 *rounds*
800 *cycles*	*Mean cycles between failure*	533 *cycles*	952 *cycles*
150 *hours*	*Mean time between failure*	98 *hours (no critical or major failures)*	195 *hours (no failures)*

An internal Army document reveals how low test scores are jacked up:

ISSUE: RAMD

	REQUIREMENT	M1 OT III AS TESTED	M1 OT III ADJUSTED *
RELIABILITY (MMBF)			
SYSTEM	101	75	99
MISSION	320	251	336
DURABILITY			
POWER TRAIN	.5/4000 MI	.34 (.21)	.40 (.37)
TRACK	2000 MI	950	950
MAINTAINABILITY			
MAINTENANCE RATIO **	1.25	1.71	1.35

* ADJUSTED BASED ON DEMONSTRATED CORRECTIVE ACTIONS; ALL CORRECTIONS MAY NOT BE IN INITIAL DEPLOYMENT TANKS.
** ON-VEHICLE, ACTIVE MAINTENANCE MANHOURS/OPERATING HOUR (10 MPH). ADJUSTED VALUE REFLECTS FAILURE RATE REDUCTION (88%) AND ATYPICAL TIME MODIFICATIONS (12%).
( ) = COMBINED DT/OT III VALUE.

In a 1980 report released to me in January 1982 after being sanitized (classified material removed), the General Accounting Office concluded that, even after 10 years of GAO prodding of the services and the Department of Defense to improve their reporting to Congress, major problems still remained. Among its findings:

Congressional testimony for 11 of 36 systems we received either (1) included misleading or inaccurate data or (2) in our opinion, could have been improved by including additional data.

Eight of 16 Navy and Air Force data sheets for fiscal year 1980 still omitted or misstated data identified during our previous review which, in our opinion, should have been reported.

Budget justification data, including RDT&E description summaries, . . . contained the following:

—Misleading or incomplete statements of system capability (three systems).

—Misleading, incomplete, or inaccurate data on planned tests, test results, or operational experience (seven systems). . . .

. . . we identified . . . incomplete, misleading, or inaccurate reporting for 20 of 27 systems included in our review which have SARs (System Acquisition Reviews).

THE M-1 ROLLS ON

To illustrate the way weapons testing is so deformed that it cannot serve its purpose, I have taken you through only one aspect of the M-1 testing—RAM-D. Deficiencies in many other, equally important, areas have not been fixed and are following the tank into full production and delivery to Europe. I discovered several very serious defects that appeared at the end of the testing of the M-1 but did not come to the fore in congressional testimony and review.

All the way through the troubled evolution of the M-1 testing, the Army has touted its "fire-resistant" hydraulic fluid and its fire-suppression system to protect the soldier from fires inside the tank. This is an important concern considering that, according to a top Israeli tank commander in the 1973 Mideast war, 300 of the 800 Israeli tank crewmen killed in that conflict were burned to death by the flammable hydraulic fluid in their US-built M-60s.

On November 5, 1981, General Vessey told the House Armed Services Committee:

Crew survivability, appropriately allocated number one priority, has had the greatest effect on the design of the tank. The system combines armor of a special design, compartmented ammunition and fuel, flame resistant hydraulic fluid, and automatic fire detection and suppresion, *to provide unprecedented crew-protection. Effectiveness of these systems has been demonstrated* conclusively *through testing of both individual structures and a combat loaded tank against a variety of potential enemy munitions including small arms, large caliber tank and anti-tank munitions, and anti-tank mines. The results are impressive evidence of this tank's outstanding protection for its crew. [Emphasis added]*

Shortly after this testimony, I obtained a copy of an anonymous maintenance cable sent from Fort Hood, Texas, to the M-1 tank command in Warren, Michigan. The cable, dated October 1981 (after OT III, the last operational testing) listed many maintenance problems, but one item caught my eye:

E. Hydraulic Fluid (FRH). The high pressure hose from the reservoir has failed twice causing severe fire damage to the tank. The FRH burn point is only 216 degrees F and flash point is 425 degrees F. Any conception that its use makes the Abrams tank fire proof is in error. A substitute more fire proof fluid should be used. As an interim solution, this hose should be shielded to divert any spray away from the hot engine.

Although the cable provided no further details about the two tank fires, the thought that these tanks did catch fire twice, with no one shooting at them, was very sobering.

The low burn and flash points of the hydraulic fluid is particularly disturbing because the exhaust from the M-1's unique turbine engine alone runs between 900 and 1,500 degrees F. There are other, less flammable, hydraulic fluids on the market. Commercial airliners use Skydrol, a much more flame-resistant hydraulic fluid.

A colleague of mine then pointed out that, since the tanks did receive *severe* fire damage, the automatic fire-suppression system must have failed. A few days later, our fears were confirmed. I obtained a copy of an Army Developmental Test III briefing, dating from the summer of 1981, that listed the fire-suppression system as a "critical hazard" for the M-1.

In December 1981 I asked Gen. Robert L. Kirwan, head of the Army's Operational Test and Evaluation Agency, whether he was satisfied that the M-1 had met its requirements enough to warrant full production. His reply:

The M-1 tank was one of the most tested developmental acquisitions within the U.S. Army. The OTEA conducted thorough operational tests of the M-1 tank, reported and evaluated those tests, and presented its findings and evaluations of those tests to the appropriate decision makers. I am satisfied that our testing of the M-1 tank was accomplished adequately, professionally, and credibly.

Congress has aproved funds for fiscal year 1982 for the M-1 to go into full production, and the Department of Defense has given the M-1 its official blessing as the US main battle tank. M-1s are now being shipped off to Europe.

CAPTURED TESTERS

Why doesn't someone *do* something about this? you may ask. They have tried. Since 1970 there has been an intense effort to get operational testing away from the promoters of the weapons—the research and development community in the services and the Pentagon—and into the hands of independent operational testers who would put the soldier above the politics of procuring weapons.

In 1970 a Blue Ribbon Defense Panel appointed by President Nixon, perhaps in reaction to weapons failures in Vietnam, studied several issues in defense procurement, including operational testing. The panel found, for the most part, that the Operational Test and Evaluation (OT&E) function of the services was not managing to weed out undesirable weapons.

The panel recommended sweeping reforms, including establishing an independent Operational Testing and Evaluation group in the Office of the Secretary of Defense (OSD) under *civilian* leadership and establishing a separate, independent Defense Test Agency. They also recommended that the OSD testing group, as well as the operational testing program in each service, have a substantial and separate budget from the R&D groups.

Under the Nixon administration, Undersecretary of Defense David Packard responded by setting up a testing group in OSD, but this group reported directly to the Pentagon's chief weapons developer and promoter, the Director of Defense Research and Engineering, who is responsible for all weapons R&D and procurement. Packard appointed a retired Army general, Gen. Alfred D. Starbird, to set up the organization. General Starbird had deep roots in the developer community; he had been program manager of the Army's Anti-Ballistic Missile System—a system plagued with problems that had been covered up in testing.

There is an ongoing debate in the Department of Defense (DOD) whether the service testing agencies and the OSD testing group are truly independent of the strong research and development community in DOD. I interviewed one person in the Pentagon who has been deeply involved in testing and prefers to remain anonymous for fear of his position. He claims that these procedural reforms are mere "window-dressing" and that the so-called independent testing agencies are still "captured" by the R&D factions in the Pentagon.

When I asked retired Adm. Isham W. Linder, the current director of DOD Test and Evaluation (the "independent" group set up during the Nixon administration), if his office is truly independent, he responded with an emphatic yes. He admitted that his funding comes from the Office of the Undersecretary of Defense for Research and Engineering but claimed this is only for convenience. He told me that he does consult with Dr. Richard DeLauer, the undersecretary of defense for Research and Engineering, but can go "straight to the Secretary of Defense" if he needs to. For the record: the DOD directory lists Admiral Linder as part of DeLauer's R&E department.

In Linder's office in the Pentagon, we talked about reporting systems and program managers who become overzealous "salesmen" for their weapons. He described the role of his office as one of "monitoring tests" and watching over the service's testing agencies. He is happy, he said, with the Navy's test agency, which has been in existence since the end of World War II, but noted that it took the other two services "a long time to accept the idea" of independent test agencies. He also expressed satisfaction with the Air Force test agency but confided that the Army's agency, OTEA, is "fighting for life" from an overbearing TRADOC, the Training and Doctrine Command for the Army.

Navy chief tester Vice-Adm. Robert Monroe and two of the weapons on which he blew the whistle: the AIM-7F Sparrow missile (being launched from an F-4B Phantom) and the Major Caliber Lightweight Gun (shown firing from a destroyer).

I left the office feeling that Admiral Linder is confident of his agency and the service agencies' watch over our weapon systems. He certainly does not seem to be the sort of man who would allow flawed weapons onto the battlefield to threaten soldiers' lives.

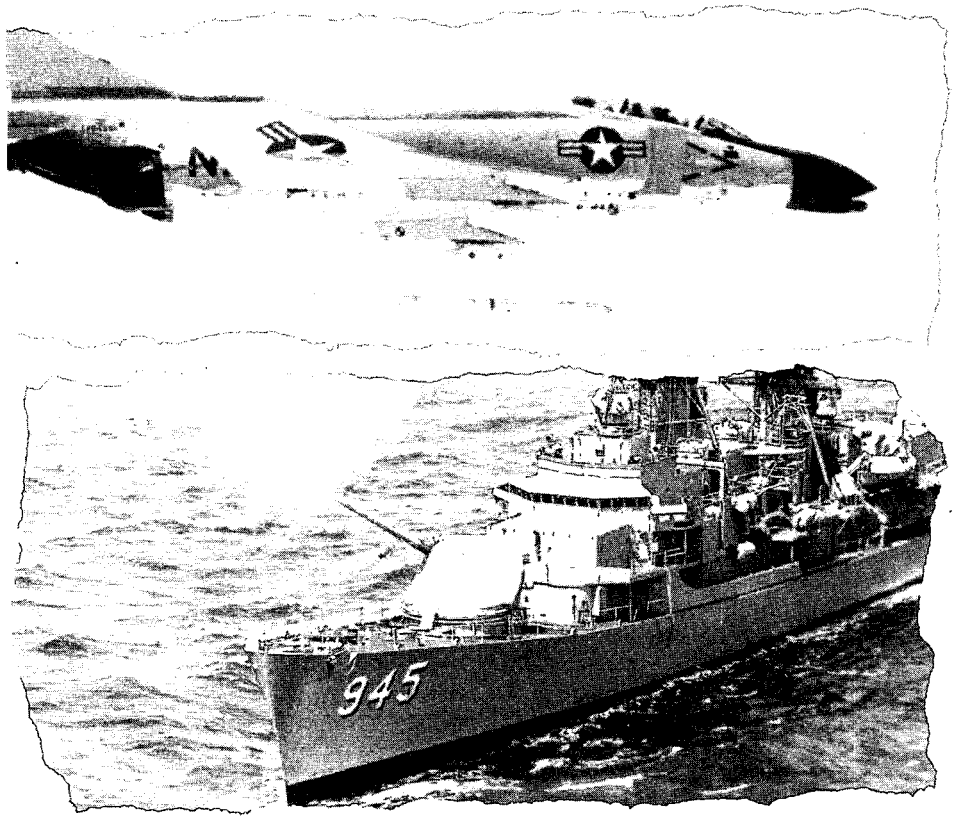
And yet . . . one must look at the record during his "watch." As director of Defense Test and Evaluation since the spring of 1978, he has overseen the testing of the M-1 tank, the newest version of the Sparrow missile, and the Navy F-18 fighter—all of which have had major testing problems. We don't know whether Linder raised a fuss at closed-door Milestone reviews of these weapons, but the ultimate proof of his effectiveness is whether the testing he "monitors" stops weapons that will fail on the battlefield.

Maj. Gen. Robert Kirwan, director of the Army's Operational Test and Evaluation Agency, is adamant that his agency is independent and reports directly to the Army vice-chief of staff. "The OTEA zealously protects its independence so that its assessments remain unbiased,"

he said in a letter to me. Yet Admiral Linder is worried that OTEA is being swallowed up by the Army developer, TRADOC.

BATTLING THE SYSTEM

Most of the "mavericks" in the defense testing area prefer to remain anonymous because they are still reliant on the Pentagon. I did meet one, however, who pushes his independence about as far as he can and still remain in a position of power. He is Vice-Adm. Robert Monroe, currently the director of Research, Development, Test, and Evaluation for the Navy. He has only been in this position for a couple of years; before that he was the head of the Navy testing agency, OPTEVFOR (Operational Test and Evaluation Force).



After a few minutes into our first interview, it was apparent that Monroe, although he has been kicked upstairs, is still an operational tester at heart. He spoke in glowing terms of the importance of operational testing and how it must be separate from developmental testing. "I believe in these things," Monroe explained. "There is a constant fight to ensure that expediency doesn't take over and weaken the (weapons) system."

He outlined the dilemmas and pressures that face an operational tester under the current system. There is resistance to his recommendations by the program manager and the sponsors of each weapon. The program manager is "on occasion more success-oriented" and willing to "burn more bridges" and move ahead with a weapon that is not fully developed or tested. Decisionmakers want to keep moving ahead with a program so that the service's budget does not lose the dollars associated with it.

Monroe insisted, however, that the operational tester wins in this struggle and that the Navy test agency is independent and reports directly to the chief of Naval Services. The 1970 Blue Ribbon Defense Panel also reported that Navy operational testing was the "most logically organized." And DOD sources confirm that Navy testing is good but worry that the test results are often ignored by higher-level brass.

As commander of OPTEVFOR, Monroe did manage to stop the Major Caliber Lightweight Gun (the MK-71) and to delay production decisions on the Navy Harpoon missile and the newest model of the Sparrow missile, the AIM-7F. In our discussion, he went into great detail about stalling production of the Sparrow air-to-air missile because of reliability problems—extremely low mean flight hours between failure.

A DOD unclassified analysis of the Sparrow testing supports Vice-Admiral Monroe's claim of good testing:

Testing conducted during IOT&E revealed or verified design and performance problems requiring major modifications. Early identification of these problems permitted the Navy (and the Air Force) to develop employment doctrine and tactics to minimize missile shortcomings. . . .

Adequate testing also provided the Services and DOD decision-makers with sufficient information to affect their decisions to delay production. . . .

Yet the report also refers to the AIM-7F's "limited potential in the more demanding combat environment" and "the controversy surrounding the missile system itself." As the operational tester of the newest Sparrow, Monroe was able to hold out on the narrow *reliability* issue but was still unable to stop it because of its lack of *effectiveness.*

The Sparrow has been built in various forms since 1955. They were used in Vietnam and were one of the notable weapon disasters in that war. At $44,000 each (in 1968 dollars) they only killed the target, according to a recently declassified DOD study of Vietnam weapons failures, in *8 percent of the firing attempts.* The testing of the new AIM-7F Sparrow was not done side-by-side the old Sparrow to see whether it improved on the major deficiencies of the old one. This new version is claimed to be more lethal, but this could only be established by extensive firings against multiple real aircraft targets. These extensive firings have not taken place. I have been told by several Pentagon sources that the missile, at $120,000 each, still is not a very effective weapon.

Even if Vice Admiral Monroe also fought against the missile because of its poor effectiveness as a weapon, he was fighting a Sparrow weapon "constituency" that had been growing since 1955. Faced with that type of opposition, he was lucky to be able to delay the Sparrow because of reliability problems.

During my second interview with Monroe, he emphasized that the Washington environment is not conducive to careful consideration of operational testing needs or results. He called Washington a "hyper-political town" where people take sides on weapon systems based on general liberal or conservative politics. He does not believe in the independence of the OSD testing agency and would like to get testing "out of Washington" and place more reliance on the operational testers in the field.

CAN WE WIN THIS WAR?

In 1977 a group of concerned defense experts in the Pentagon and President Carter's transition team, dismayed at the existing testing structure, took advantage of a new-administration reorganization. They convinced then-Secretary of Defense Harold Brown that testing had

to be pulled away from the influence of the R&D community in the Pentagon. Secretary Brown agreed to set up a new independent testing and evaluation office to, as he told Congress, separate "the analysis of operational test results from the personnel responsible for research and engineering, thereby providing me with completely independent evaluation." The plan called for splitting the testing in the Office of the Secretary of Defense, leaving developmental testing to the developers and operational testing to the new independent group.

The R&D community saw this attempt as a direct attack on their ability to move weapons through the system without criticism. The attempted "coup" only lasted a little over a year. The undersecretary of Defense for Research and Engineering at the time was William Perry. According to Rep. Les Aspin (D-Wis.), Perry had convinced Harold Brown to limit the staff of the new OT&E organization to 8 people instead of the recommended 22 and had made it impossible for the group to obtain a formal charter that would allow them to ensure adequate operational testing. They did find that several major weapons—the Pershing II missile, the Infrared Maverick missile, and the GBU-15 (a TV-guided missile)—had been prematurely pushed into the production stage despite serious failures during testing. But in October 1978 the independent OT&E office asked to be disbanded (a remarkable occurrence in any bureaucracy) because of the impossibility of carrying out its functions without an appropriate staff and charter.

Congressman Aspin learned about the death of the agency after he discovered that the telephone number had been changed. He objected to the demise of the office, but to no avail. When I interviewed him recently, he referred to the OT&E defeat as "an indication of lack of commitment to getting to the heart of the problems of military procurement."

So what is the solution to the inordinate power of R&D interests? How can we get effective and affordable weapons to the soldiers in the field?

Vice-Admiral Monroe's proposal to get testing out of Washington might work if all the operational testers were as hard-nosed as Monroe, if the test data were not laundered, and if decisionmakers would listen to the operational tester and make the hard decision to cancel a weapon that will not work. There are too many loopholes for the weapons promoters to slip through in Monroe's solution.

Kwai Chan, group director of the GAO's Institute for Program Evaluation, would like to see money appropriated for *missions* and have several types of weapons in each service compete for this mission budget. For example, we might have the mission of defeating an enemy tank, and the Air Force would compete with the Army to come up with the best solution. This could be a very productive idea if the services would cooperate and if the testing were honest.

Several sources inside the Pentagon still believe in the possibility of an independent testing agency. One of them believes such a group could be successful if given "young and tough guys" who had not been trained in the old bureaucratic system. With the Reagan administration's moves to "decentralize" DOD, however, turning over major decisionmaking to the services, it is unlikely that this is a viable option for some time.

It is patently clear that more governmental studies or investigations will not solve the problem. Additional paper reforms promise to be deformed by the bureaucracy to fit its need to survive and advance careers.

How can this overzealous, money-spending developer complex be reformed? As a defense "ombudsman," it has been very hard for me to understand why people in the bureaucracy are able to do such a basically evil thing as to send a soldier into battle with a weapon that they know will fail. Thomas Amlie, former director of the Navy Weapons Center at China Lake, who has been in the system over 20 years, shed light on the problem in a paper widely circulated in the defense community a few years ago:

The DOD has all the symptoms of being corrupt, incompetent and incestuous, and is so to an alarming degree. This is not because of some sinister plot. . . . Many of the players are aware that things are going badly and are unhappy because they do not have meaningful jobs where they can contribute. They are not, in the main, dishonest or incompetent, just caught in a very bad situation. . . . The bureaucrat soon learns that he who does nothing has a simple life and he who tries to do something gets in trouble. Even if the doer succeeds, he is seldom rewarded. All pressures are to maintain the status quo and not rock the boat because the Congress and Administration are willing to put up the money every year, independent of the results. . . .

The basic reason for the problem is incredibly simple and will be incomprehensible to one who has not spent time in the system: there is no profit and loss sheet. Thus, there is no competition or incentive to produce. The goal of every good bureaucrat is to get an exclusive franchise on whatever it is he is doing. If nobody else is doing it, no one can measure how well or poorly he is doing it. . . . The only requirements are to stay busy, generate paper and make no mistakes. The reader tempted to criticize this behavior is invited to first imagine himself in the situation, complete with a large mortgage and children in college.

So to make sure we deliver affordable and effective weapons to the battlefield, we must have good and independent operational testing. But in order to have this type of testing, we must dramatically change the way the Pentagon procures its weapons.

Some simple but major changes would be to set up a testing system in which the developer and promoter of the weapon must turn the weapon over to the operational testers when the development tests end. Under the current system, these tests often run concurrently, OT and DT results are often muddled together, and there is no distinct decision point to go or not to go with the weapon. Another improvement would be to fire people who cover up, lie, or attempt to promote a weapon system that is not working. This would send messages throughout the bureaucracy that successful weapons, and only successful weapons, can get people promoted. It is also essential for Congress to insist that test results be reported *under oath.*

One of the most effective changes would be to refuse to fund any new weapon that costs three times as much as its predecessor, to set a reasonable budget limit for each new weapon *and refuse to change it,* and to reward innovative people who produce inexpensive and effective weapons—in other words, insert a profit and loss sheet in weapons procurement.

These changes would require a giant change in attitude on the part of the Pentagon, Congress, and the general public. One of the first steps toward this change is to support honest operational testing and a stronger role for test results in the decisionmaking process. This first step is necessary to begin to weed out the generation of ineffective weapons that are still being produced, "fixed," and handed over to our soldiers.

Can we do this as a nation without another war filled with weapons failure horror stories and countless numbers of our sons unnecessarily lost? ◻

Dina Rasor is director of the Project on Military Procurement of the National Taxpayers Legal Fund in Washington, D.C. She has worked as a radio reporter and as an editorial assistant for ABC News.

THE MINT STRIKES OUT

By Ray Young

When the Treasury Department and the Federal Reserve System began an unsuccessful effort to force the now-notorious Susan B. Anthony, or "mini-dollar," coin into circulation, they continued a tradition of trying to force government theory into the marketplace that dates back to the early Lyndon Johnson administration. Since 1964, various elements within the Treasury Department's bureaucracy have managed to take a traditional government function—coining money—and shape it to fit views that ignore the demands of the store counter, vending machine, and purse. Widespread complaints about the new dollar's similarity to the quarter, and its subsequent failure, make up only a small chapter in that story.

By early 1963 it was obvious that the Treasury would soon run out of silver if it continued to use that metal for money. The prospect encouraged widespread hoarding of silver coins. That, in turn, aggravated a growing shortage and led to even more hoarding. Pending legislation that would permit a substitute for silver, the Mint's only recourse was to try to keep production high enough to meet demand.

In late 1963, when President Johnson called for a new half-dollar design to commemorate John F. Kennedy's assassination, the Mint stepped up production of the old Franklin-Liberty Bell design then in use. The public's immediate response was to hoard all it found. By the end of 1963, 92 million halves had been coined—and promptly removed from circulation by hoarders.

The Mint Bureau released the first Kennedy half-dollars in March 1964. Again, people squirreled away the coins. Although by August over 100 million had been struck—an all-time record—the Kennedy still didn't circulate. Eva Adams, who was then director of the Mint, responded by continuing heavy production of halves. By the end of December, over 205 million had gone to the banks. By the time the Mint stopped making 90-percent silver coins in early 1966, a total of 433,460,212 Kennedys had been made.

But the coins were useless because they didn't circulate. When the government began an active effort in the late

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1960s to withdraw the 90-percent silver coins that remained in circulation, it pulled in mainly dimes and quarters. The half-dollar—thanks to the Kennedy craze and Mint mismanagement in promoting that issue—had vanished from circulation long before.

The silver alloy put into noncirculating halves, which the Mint struck in complete disregard of what was happening, could have produced nearly 867 million quarters or well over 2 billion dimes. Those were the denominations the public used. By the early 1950s, it had become obvious to anyone who went shopping, bought gas, or used vending machines that the half-dollar had lost popularity. Most people preferred two quarters. Indeed, one of the best ways to exasperate small store owners was to pay for a purchase with several halves.

After the Kennedy craze died down, the Mint continued to pour out that denomination in a cheaper alloy, containing only 40 percent silver. In 1971, when the price of silver was rising and there was no need for even token government support of the silver-producing lobby, the Mint secured legislation to permit coining of half-dollars in base metal, like the quarters and dimes. By that time, the half was virtually extinct as a circulating coin. The public didn't hoard the cheaper silver halves or the nickel-plated-copper ones. Those coins simply sat in banks, because most people wanted dimes and quarters.

Yet the Mint continued to produce halves. One of the most amazing justifications for this came in a Treasury spokesman's claim that the half was needed to operate coin changers. A four-year-old could have told that official that people put halves in change-makers because they want *other coins* that will work in most vending machines. Evidently the veil of officialdom managed to hide that fact from the Mint.

By 1978 the Mint had cut down on half-dollar output, finally realizing that the half was too large and unsuited for most vending machines. But even then it continued production, using the strange argument that it needed congressional approval to quit making it. Evidently, nobody at the Mint knew that on numerous occasions in the past, when demand for a certain denomination was low, the Mint had simply suspended coinage. The law only said that the half-dollar had to be of a specific weight and metal content—it did not prevent the Mint from suspending half-dollar production in 1922, 1924, 1925, 1926, 1930, 1931, and 1932. There were also years when no nickels, dimes, or quarters were made because the supply was adequate. The Mint, however, continued to turn out unneeded and unused halves.

In 1971 the Mint began coining the large, copper-nickel-clad Eisenhower dollar, supposedly for general circulation. The only satisfactory theory for that coin's existence (other than an excuse to honor a dead president and give the Mint staff something to do) was to provide a coin that would work in slot machines in the Nevada casinos. But the Mint was foiled again: the silver dollars began to disappear into hoards, and casinos had to buy privately made tokens.

The Ike dollar circulated even less than the half did. Although it had become obvious as far back as the 1880s that people did not want to walk around burdened with silver dollars, the Mint Bureau made over 570 million such coins from 1971 through 1978. (That did not include silver pieces made solely for sale to collectors.) The Mint Bureau, which had obtained a huge new plant in Philadelphia in 1969, evidently felt it had to keep its presses running.

In 1976 the Treasury reintroduced the two-dollar bill, after having stopped production a dozen years earlier. The "deuce" went out of production in 1965 because the public did not like it. The principal use of that denomination was to show civilians around military bases how much their economy depended on the Army/Navy/Air Force payroll: personnel paid in cash often got the two-dollar bill, which quickly returned to banks, to repose there until the next payday. (The National Guard also used this gimmick.)

The public disliked the deuce because it was too easily confused with a five or a one and because it wasn't necessary. As with the half-versus-quarter issue, most people preferred two singles to a two-dollar note.

Using the bicentennial celebration (and a new reverse design) to get additional publicity for the unpopular currency, the Treasury decided to resurrect the two. Within a few months, however, after the craze to get a bicentennial bill died out, it was obvious that the public didn't want the denomination any more than they had back in the early sixties.

The deuce was reissued on the strength of a fouled-up bureaucracy pretending that it knew how to cut costs. The Treasury claimed that large-scale use of the two would save money by reducing demand for singles. The dollar bill, being the most widely used denomination, has an average life of just about a year. Since it costs no more to print a two, five, ten, or twenty than it costs to print a one, the deuce theoretically would save the government money.

The problem with a two-dollar note, which the theoreticians in the Treasury had ignored, was that getting rid of the one-dollar bill would mean someone using a two for small purchases would be burdened with a lot of metal change. The Treasury then sought to overcome *that* obstacle with the Anthony dollar in 1979.

When the small dollar coin appeared, the Federal Reserve System had its district banks issue extensive propaganda to merchants, telling them how they could set up cash drawers so they could use the dollar coin and the two-dollar bill instead of singles. The *theory* behind the one-dollar coin was a good one: it cost about 3 cents to produce and had a possible circulating life of 25 years. In actual *practice,* however, the Mint Bureau seems to have made a studied effort to avoid any metallic substitute for the paper dollar.

The Mint finally wised up to the fact that the public didn't want to carry around a lot of heavy change, so it made the Anthony dollar small. But in producing a small coin, it made one that was easily confused with the *quarter.* Merchants and bankers, not to mention the ordinary consumer, hated the piece, and in 1980, the Mint cut back on production after nearly 847 million "Agony dollars"—as many came to refer to the numismatic failure—had been created to fill bank vaults and do little else.

The small size of the Anthony dollar was based on the Mint's observation that the public didn't want a larger coin. But in making a quarter-sized dollar, the Mint ignored the successful practice of many foreign nations: all it had to do was give the piece a distinctive shape.

Mint Director Stella Hackel-Sims, in justifying the Bureau's actions, claimed that "technical reasons" prevented the United States from making a coin that wasn't perfectly round. Yet the Mint Bureau's very own publication, the director's annual report, year after year reports on foreign coin production. In doing so, it includes coins that have scalloped edges or such variations as six, seven, twelve, or even four sides.

Canada, for many years, made a 12-sided nickel. It was first made in 1942, when the country switched to a brass alloy for the five-cent piece and did not want the new wartime nickel to be confused with the cent. The distinctively shaped coin was continued when Canada switched to minting steel coins in 1944.

To avoid confusion with smaller denominations, Great Britain made a brass 12-sided threepence until 1967 when it adopted the decimal system. In 1971, when the country adopted a pound of 100 pennies, it hit upon a *seven*-sided 50-new-

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Let Your Fingers Do the Talking

By Peter Samuel

As many small businesses fail each year as succeed. But America depends enormously for its economic vitality on those that do make it, for small entrepreneurs have been the dominant producers of new technology. Take, for example, the case of Michael Schiller.

Schiller owns a small security-systems business in White Plains, 25 miles north of New York City. An electronics and optical engineer, he became interested in the '70s in a problem of the computer age: criminal use and counterfeiting of plastic credit cards.

Since Diners Club, Carte Blanche, and American Express adopted it in the mid-1950s, the plastic credit card has become a ubiquitous means of identification. Stamped with that small, black, magnetic strip on the back, the card now can communicate with computers. But modern-day, sophisticated criminals are quickly learning about plastic cards and their associated computer systems.

Credit card issuers do not like to publicize the fact, but plastic-card counterfeiting is a growing security problem. The plastic-forming machines and colored plastic granules used to manufacture cards are easily obtained and worked. And at the other end of the system, at the computer center, files can be manipulated and data stolen.

Most US bank customers using plastic teller-machine cards are protected by being asked to memorize a "personal identification code," usually four digits, which is fed directly into a heavily secured computer file. As long as that computer file is kept secure, a stolen or counterfeit card cannot be used to empty a bank account or otherwise operate the system. But how to protect the computer file of memorized codes? (At present there is talk among New York security businesses about a bank having lost a complete listing of all its customer codes. No publishable story, however, has yet surfaced.)

The plastic card itself has the inherent disadvantage that it only identifies a *card,* not the proper card*holder.* So big businesses and small—including people like Michael Schiller—have jumped into the search for alternatives, which has become a classic entrepreneurial adventure (even if it *is* referred to by a forbidding bit of jargon—"biometric access control").

By measuring and recording certain unique personal characteristics, biometric access-control systems solve the shortcomings of cards. People's voices, for example, each have unique characteristics, and the principal engineering efforts have gone into developing machines that recognize these. Other systems have tried to measure and identify signatures, hands, and fingers.

Over telephone lines, computerized voice-recognition systems will be essential for security. Banking by telephone is presently very time-demanding of a bank's staff: they must ask random questions in order to form a judgment about the legitimacy of the voice on the other end of the phone.

Throughout the '70s competitive innovation and development of various voice-recognition systems has been fierce, and considerable progress has been made. Some systems work in some applications. Others are too error-prone, cumbersome, and expensive. Three or four years back, however, it was the consensus of the security business that voice recognition would serve all purposes.

Michael Schiller was an odd man out. At a time when voice-recognition systems were considered the wave of the future and when other alternatives were being neglected, Schiller was skeptical that they could provide the whole answer. He was convinced that he could develop a computerized fingerprinting security system, which would be better than voice recognition for many applications. So in 1976 he pulled out of a more general computer-terminal business and with money from family and friends,

(Continued on p. 44)

Illustration by Matthew Burbott

Chile's Economic Revolution

An eye-opening, first-hand look at the world's most radical attempt at economic decontrol

A Note to Our Readers: Aware of the controversial nature of this article, we are taking the unusual step of explaining why we are publishing it. We are not among those who hold that Chile's ruling military junta can hardly do wrong because it overthrew a socialist government. Yet we think it equally narrow-minded to believe that there could be no good news coming out of Chile.

Having gleaned snippets of seemingly good news about the economic reforms in the country, and aware of the impending travels of our author to Chile to work on a book on the country's economic policies, we asked her to investigate. What she found, during months of living in Chile and interviewing everyone from government officials to poor children on the streets, is a remarkable economic turnaround for Chileans under a government that has explicitly moved in a free-market direction on the economic front—and bold moves to let people handle privately some economic decisionmaking that many Americans are afraid even to consider removing from Big Brother.

The moral of Chile's economic success story, and the reason we are publishing this article, is the vast possibilities that are unleashed when an economy is not subjected to government meddling. Can such decisive moves only be made by an iron-fisted government? Ms. Rosett addresses that issue. For the record, however, neither we nor she condone whatever repression is also perpetrated by Chile's regime. But it would be too bad if, because of condemnable political policies, Chile's economic success story remained a secret that people don't want to know. —*THE EDITORS*

BY CLAUDIA ROSETT

TWELVE YEARS AGO CHILEANS went looking for a free lunch and instead found themselves moving toward a free market. Between Salvador Allende's radical socialism and Augusto Pinochet's ambitious capitalism, Chile's recent history looks like a laboratory experiment dreamed up by an insane economist. The results, however, deserve close attention. Even those sympathetic to Allende's regime admit that Chile's socialist economy was a crashing disaster; those who deplore Pinochet's rule must concede that the substantially capitalist economy is working, and working well.

Among Chile's more original free-market features are private social security and a deregulated transportation industry; and a school voucher system has brought effective competition to education services at the grade-school level. Inflation is under control, and trade is growing. A common Chilean complaint is that too many cars are on the road these days—usually said while turning a key in the ignition of a new Datsun or Suzuki.

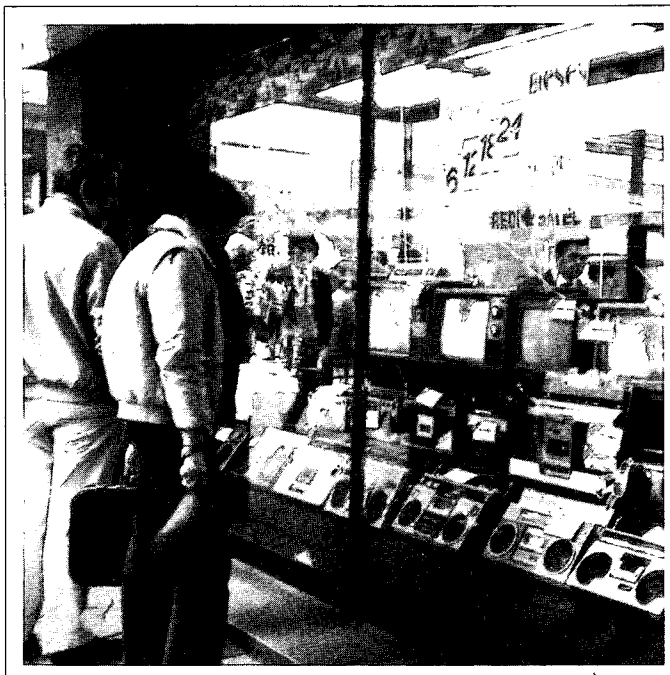
In downtown Santiago the shops are crammed with imported Japanese radios and TV sets, Italian shoes, and American jeans. Ads exhort customers to buy at off-season sales and to sign up for private health insurance. Even in the tiny lumber-village of Chanco, where electricity is a novelty of the last decade, more than half the children playing in the town square report that they have TV sets at home. Infant mortality has dropped from 71.1 per 1,000 livebirths in 1972 under Allende to 36.3 in 1979, and the percentage of families living below the poverty line fell from 20 percent to 13.6 percent in the six years following Allende's overthrow.

The abundance of consumer goods and improvements in well-being make a dramatic contrast with the Allende period,

when women marched through the streets of Santiago, banging on pots and pans to protest shortages of bread, meat, fuel, and almost everything else. These demonstrations marked the beginning of the end for Allende, whose three-year government tore the economy apart and brought Chile to the edge of civil war.

When Allende was voted into office on a 36.2 percent plurality in 1970, a popular magazine called *Ercilla* wondered whether he "would be able to carry out his socialist experiment without destroying the traditional democratic fabric of the country." Three years later the answer came in the form of a military coup that averted economic collapse and civil war—but at the expense of imposing dictatorship on one of the world's oldest democracies.

A 1980 World Bank report on Chile concluded that, by the end of Allende's presidency, real gross domestic product per capita and real wages were lower than in early 1970, and agricultural output had fallen to the level of the early 1960s. The socialist recipe for disaster was straightforward. Allende proposed to turn Chile into a worker-owned state by nationalizing industry and encouraging a brand of violence that he tagged as "class struggle." The strategy entailed illegal importation of arms from Cuba and an official open-door policy toward foreign nationals. Estimates of the number of activists from places like Cuba, Argentina, and the Soviet Union, allowed entry to help with the takeover of farms and businesses, range as high as 13,000. In 1971 alone, Allende nationalized more than 80 companies and sharply accelerated a land-reform program begun under previous administrations (almost 1,300 land seizures were reported in 1971; 340, in 1969 and '70 combined).



Shoppers on Ahumada, Santiago's pedestrian shopping street, can choose from a vast array of electronic goods.

For the first year, all seemed well. Chile lived off its capital, and GNP rose 5.2 percent in real terms. Inflation dropped from nearly 35 percent to 22 percent in response to tight price controls and a fixed exchange rate. Allende seemed to be providing a glorious confirmation that socialism could work.

Then, in 1972, the bills began to come due. The government was running out of international reserves; inflation had rocketed to 163 percent; and price controls had created official shortages, along with a booming black market.

By 1973 the government had expropriated more than 450 corporations, and most of them were running at a loss. The black-market exchange rate had soared to more than 10 times the official rate. More than half of government spending was financed by printing money, and by August 1973 inflation had reached an astronomical annual rate of 1,000 percent. Chile was unable to repay its foreign debts and could no longer obtain loans from non-Communist countries.

Allende had proposed rationing to handle the shortages, and protest demonstrations, along with clashes between right and left, had become almost a daily event. In August 1973 Congress issued a declaration condemning the regime for its attempt to "take total power in order to. . .achieve the installation of a totalitarian system which is absolutely opposed to the representative, democratic system established in the constitution." In Santiago, Chilean women sprayed military officers with yellow paint as a protest, they proclaimed, against their cowardice in refusing to intervene to save the country from civil war.

Yet intervention was not a simple solution. While the military might be able to overthrow Allende, they were not trained to handle nationwide economic catastrophe. Shooting rockets at the Central Bank was, at best, a short-term solution.

RECOGNIZING THE NEED FOR an economic cure, a retired naval captain, Roberto Kelly, arranged in late 1972 for a group of professors at Chile's major private university, the Catholic University of Chile, to prepare a recovery plan for the country. Although the venture was billed as an academic exercise, the plan was clearly intended to have practical application when the time was ripe. (An American economist, who prefers to remain anonymous, claims that the CIA funded at least part of the project. He would not give details, and Chileans involved deny any knowledge of this.)

The group of professors who worked on the plan would later become known as "the Chicago boys," for their recovery strategy was based largely on the free-market economics they had learned as graduate students in economics at the University of Chicago. Since 1955, Chicago had accepted Chilean students under an arrangement with the Agency for International Development set up by Nobel Prize-winning economist Theodore Schultz. The students would study at Chicago with free-market expositors and advocates such as Milton Friedman, Gary Becker, and Arnold Harberger, then return to Santiago as professors of economics in their own right. The group that worked on the economic plan in 1973 included Sergio de Castro, who is Chile's minister of finance today; Juan Carlos Méndez, who was director of the budget until 1981; and about 10 others, most of whom have since held policymaking positions with the Pinochet government.

By early August 1973 the plan was finished and in the hands of the military. On September 11, the day of the coup in which Allende died and Pinochet took over Chile's government, Kelly reportedly burned out a Xerox machine copying the plan to distribute to still more new government officials.

Pinochet's military government, however, was still trying to assess the economic situation, cope with pockets of armed resistance, and decide generally what to do next with the country. There was little emphasis on an overall economic plan.

Some of the Chicago boys were appointed to second- or third-level positions in the ministries of Finance and Economics, and Kelly became director of the Office of Central Planning, with some Chicago boys as research assistants. But the over-all free-market plan initiated by Kelly in 1972 did not come into its own for three years.

For a while Chile wobbled along, with a large measure of its stability supplied by the high price of copper, which accounted for 83 percent of exports. All the copper companies had been nationalized under Allende, bringing large revenues to the government but also making enemies abroad. Allende's method of nationalization had involved offers of payment to large foreign companies, which he then canceled out by imposing a retroactive tax on "excess profits." This move, among others, had made Chile a very poor credit-risk to foreign investors and left the Chilean economy dependent on a product with a highly volatile price.

In 1975 came OPEC and world recession, and the price of copper dropped through the floor and went on dropping. One economist who was making budget projections for that year recalls that they would revise the budget week by week as the price of copper went lower and lower, until it stabilized at about half the old price. The economic situation went from critical to almost ridiculous. GNP growth dropped from 4 percent in 1974 to -14 percent in 1975, and unemployment rose from the already worrisome rate of 9.2 percent to 16.2 percent.

Again, Roberto Kelly took the initiative and approached Pinochet with an assessment of the crisis. Kelly was given 48 hours to propose a general plan for economic recovery, and after less than a week of hurried consultation, Pinochet took the leap of faith that vaulted the Chicago boys to at least national, if not world, fame (or, for some, notoriety) and became the turning point for Chile's stumbling economy.

Some of the free-market policies proposed in the economic recovery plan drawn up by Kelly's team were already halfway in place. Almost immediately after the coup in September 1973, Vice-Admiral Lorenzo Gotuzzo, who became minister of finance, had gone on television to announce a new set of policies. Price controls were removed from the more than 3,300 regulated goods. Tariffs were reduced. (By the end of Allende's government, tariffs averaged 105 percent on 5,125 protected goods—a level that effectively prohibited many industrial imports at the expense of the agricultural sector.)

The military government also moved immediately to establish a single exchange rate, instead of the multiple rates Allende had used to try to manipulate trade. And it began returning the roughly 300 corporations that had been nationalized outright and auctioning to the private sector those that had been bought by the government after Allende's policies had driven down their value.

These policies were not drastic or pervasive enough, however. The government budget continued to run a deficit, and inflation stayed painfully high—375 percent in 1974 and 340 percent in 1975.

WHEN PINOCHET DECIDED to put his money on the Chicago boys' card in 1975, he appointed several of them to top positions in the government. In putting together a recovery plan, the Chicago boys had the advantage that almost all of them had been educated at the same place and had come out with the same economic philosophy: that the market operates most efficiently, to the benefit of the most people, with minimal government interference. Today they are still called in Chile the "equipo Econômico," or "Economic Team"—a name that reveals a lot about how they operate.

Some of the biggest critics of government policy are the very businesses that have benefited most from a free market.

The first priority of the plan was to balance the government's budget. This was no easy job, but Chile could not reduce its inflation rate, they maintained, unless it could find another way to cover or eliminate its still enormous deficit, either by borrowing or by reducing spending. Borrowing was almost impossible, explains Sergio de la Cuadra, a Chicago boy who is today president of the Central Bank. "In 1975 the Central Bank suffered a real trauma. We were not able to raise a single dollar abroad."

Faced with this situation, newly appointed budget director Juan Carlos Méndez went to work in a way that makes David Stockman look timid. Méndez made across-the-board cuts of 15 percent in all government spending on domestic goods and 25 percent on all imports. "It's not a very scientific way to do it, but it was important to do something right away," recalls Méndez. "After that we began to fine-tune."

To make the budget cuts work, the government continued the process of auctioning off State-owned corporations and embarked on a divide-and-conquer campaign that forced those that were still publicly held—about 20—to behave more like private corporations. Kelly illustrates the strategy with the case of ENAP, the Chilean oil monopoly that is still in State hands. "ENAP became a holding company with three or four subsidiaries. When they were all lumped together, no one could distinguish where the inefficiencies were. Today, each department must demonstrate its profits. The refineries can buy oil from outside or from Chile, and the company must pay taxes and issue dividends to its shareholder, the government, or management will be changed, just as in a private company."

One government official adds another example of how Chile reduced spending on inefficient companies. LAN Chile, the State-owned airline, was cut off from subsidies and forced to compete with privately owned airlines on equal terms. After learning its lesson the hard way, when the government refused to bail out LAN Chile on an unpaid fuel bill, the airline renegotiated its loans and revised its schedules and routes. Today it is one of three competing major domestic carriers. The other two belong to the private sector, and all are responsible

for their own profits and losses.

For six years the Chilean government maintained a policy of denying subsidies to private corporations. In October 1981 Sergio de Castro, minister of finance, made a brief speech in which he reminded the nation's businessmen: "It is not the case, as some people seem to think, that profits are for the companies and losses are for the State. Profits and losses are both for the companies." Unfortunately, in that same month the government succumbed to recessionary pressures and bailed out eight financial institutions that were reportedly on the brink of collapse.

The budget-cutting strategy, coupled with careful control of the money supply, was radically successful at bringing inflation down from 340 percent in 1975 to 39 percent in 1979 to less than 10 percent in 1981—a level well below the average Chilean rate of 25 percent even before Allende. To further help the economy recover as fast as possible from the damage of inflation, the government introduced an indexing system for wages and taxes, home mortgage rates, and even parking tickets. Today, daily fluctuations in the consumer price index are published in the newspapers, and even the maids expect the quarterly inflation readjustments that help Chileans maintain their purchasing power.

Main office of the number-two private social security company, Santa Maria, in downtown Santiago.

RETURNING COMPANIES to the private sector was not enough to introduce market efficiency, however, as long as prohibitive tariffs were still in place. Under the recovery plan, the government continued to reduce tariffs until in 1979 they were stabilized at a uniform 10 percent on all imported goods except large cars, which are on a gradually decreasing schedule that is also slated to reach 10 percent over the next few years.

A government economist explains that some of the team favored dropping tariffs to zero but agreed that too many people would be terrified by such a move; better to give them a radically revised version of a familiar old policy. This is typical of how the Economic Team has managed to work with the rest of the government. Where the recommendations of a free-market purist would be blocked by the military or other powerful interest groups, the team at least attempted some compromise that could move the country further toward a free market.

The 10-percent tariffs mean that Chilean companies can compete effectively in a world market. Many of the formerly fat, protected industries were obliged to trim costs in order to survive. And domestic producers who had been up against subsidized imports of such goods as grain were now able to compete on a fair basis in the world market. Chile is thus moving toward a more efficient use of its resources. Instead of taxing people to provide subsidies for inefficient industries, the government is now allowing Chilean producers to find out what they can do most efficiently and offer those services in the world market.

The result has been healthy in a number of ways. Not only are Chileans able to choose from a large variety of goods available on the world market, from small Japanese cars to different brands of toothpaste to Coca-Cola from the United States and fruit-flavored soft-drinks from Brazil, but the composition of exports is also far less lopsided and hence less risky. Although copper was 83 percent of exports in 1973, today it is only 34 percent, with the difference supplied by new exports such as fruit and manufactured goods. Chile is suffering again from world recession, as it did in 1975, and the price of copper today is at an all-time low in real terms of about 73 cents per pound. Yet GNP growth has merely slowed from 8 percent to an estimated 4-5.5 percent for 1981, since the copper losses are a far smaller part of Chile's overall export earnings.

A MORE CONTROVERSIAL PART of the government's recovery strategy, from the point of view of economic liberty, has been its labor plan. Effective since 1979, the plan allows unions to organize at the firm level but mandates open shops (workers cannot be required to join the union in order to be employed). Sympathetic strikes as well as industry-wide strikes are prohibited.

Workers are allowed to strike, and firms are allowed to engage in lock-outs, only after a 45-day negotiation period since the presentation of a new contract. If workers choose to strike they have 60 days either to sign a new contract or to return to guaranteed old jobs at, as a minimum, their former salaries plus a 100-percent cost-of-living adjustment. Once the strike has gone past 60 days, workers are no longer guaranteed their jobs back and the company may hire new people and negotiate new wages.

While Chile's labor plan lays down the rules of the game for labor-management relations, it does allow the government to avoid getting into the thick of contract negotiations because there are incentives for both employers and employees to work things out. During the first six months of the plan, approximately 2,000 draft contracts were presented, and agreement was reached on 97 percent of them before the end of the 45-day negotiation period, according to ex-Labor Minister José Piñera.

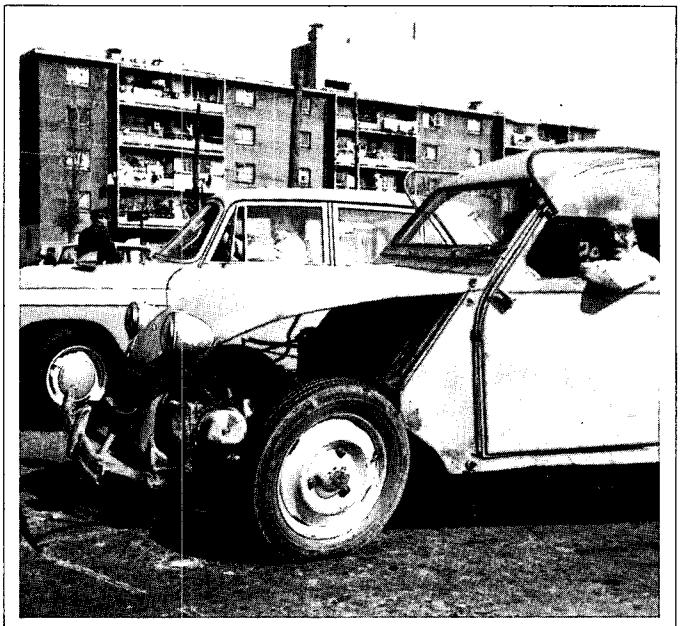
Recently the labor plan was put to a strong test. The longshoremen's union, a traditionally strong union in almost all countries, had been given a temporary exemption from the open-shop requirement, but it was required to comply with the labor plan as of September 25, 1981.

The government began issuing licenses to any able applicant who wanted to work in the ports. The union, which had long enjoyed the privilege of naming all dock-workers and charging monopoly rates to shipping companies, protested loudly to the

president and the press but was unable to muster enough support or a credible argument for maintaining its privileged status. Today the ports are staffed by both union and nonunion workers, and a port authority spokesman, Diego Sepúlveda, estimated in October 1981 that costs of cargo handling in Chilean ports would fall at least 20 percent.

PERHAPS THE MOST RADICAL of the Chicago boys' moves was their attack on Chile's ancient and monstrous social security system, which had been a pay-as-you-go transfer plan, similar to that now in the United States although even less sound, and discriminatory with respect to occupation. (Blue-collar workers' pensions were a far smaller percentage of their income than were benefits for government officials, bank officials, and the military.)

The result, in place since May 1981, is a private social security system, in which workers must pay a tax-free minimum of 10 percent of their salaries up to $1,800 per month into pension funds managed by private, competing companies. Within six months of privatization, 12 firms had entered the market, and upwards of a million people, more than one-third of Chile's labor force, had voluntarily enrolled.



With high protective tariffs (prior to the Chicago boys), Chileans had to make do with crude domestic vehicles like this one.

The companies charge fees for handling the monthly payments, managing the funds, and eventually administering the accumulated pension benefits. Any firm with a minimum capitalization of $600,000 and a viable plan can go into the pension business. Workers are allowed to transfer their savings from one company to another with 30 days' notice, and companies must give 60 days' notice before raising their rates. The firms are so competitive that several of the largest ones engaged in an all-out price war during the first two months of the system, which, as Labor Minister Miguel Kast points out, "only benefits the customer."

Kast also gives their rationale for the government's having instituted a few fail-safe mechanisms: it is hard at first to persuade people to trust free enterprise with their pensions. So pension funds may only be invested in fixed-income instruments such as mortgage bonds and short-term certificates of deposit, and portfolio diversification is required. In addition, the government receives daily reports on the performance of each fund, and every pension company is required to put up margin deposits against drops in performance below that prescribed by a formula based on average returns to all the pension funds. The investment instruments are indexed to inflation, and the expected real rate of return is about 4 percent.

Current workers are not required to register with the new system. They have a choice of staying with the old transfer plan or switching to the new system, although anyone who switches to the new system is not allowed to switch back. By the end of 1982 all new workers will have to join the private system, and the government will continue to make appropriate payments to those who remained with the old plan, drawing on general government revenues as the number of workers-contributors declines to zero. For those who were paying into the old plan and decide to switch, the government will pay into their new account a pro-rated amount of the benefits they would have received.

The private savings plans have had an interesting side effect, as Jorge Cauas, ex-minister of finance and chairman of the board of the largest private social security company, called Provida, points out: "Having their own tangible accounts gives the people a sense of private property, which is important to the future well-being of the country." Chileans who save with a private company are issued monthly statements recording each of their payments and bringing their pension accounts up to date. When one of the companies was late issuing the statements, a lot of savers protested to both the management and the government. "Ten years ago that never would have happened," says Cauas. "They would not have expected to see the money again. Today they view it as their personal property, and they care very much how it is managed."

PRIVATE COMPETITION is also coming to education, where the government provides subsidies for schoolchildren that can be used as tuition in private schools, in what amounts to a voucher plan for grade-school education. Chile has had such a subsidy system since 1951, but only since 1978 has the amount of the subsidy become large enough to have a practical effect. Formerly, payments were made six months to a year after a student enrolled in a private school and were not indexed to inflation.

Today, the government allows any child to enroll tuition-free in a public school or, if he enrolls in a private school, reimburses the school directly for about 100 percent of the cost of educating a child in a public school. For that amount a large number of new private schools are going into the education business. In the Santiago area alone, more than 400 applications to start new schools were approved during the first half of 1981. Since subsidy-per-child is the same across schools, and the profits of running a private school come out of whatever can be saved on costs, there is an incentive for private schools to start first in the lower-rent districts, which means poor people will benefit most from the competitive incentives faced by such entrepreneurs.

Since the private schools are competing with both the public system and one another, they must be good in order to attract students. Mrs. Olga Arias Muñoz, a former public school teacher, started her own school a year ago in one of Santiago's poorest neighborhoods, Pudahuel—one of Allende's strongest centers of support in the early 1970s. When she opened the doors of her school on the dirt roads of her Pudahuel neighborhood, she received 350 applications for 250 places. "You have to have good teachers," she explains. "If you do, it's easy to get students. If you don't, you might as well close the school."

To ensure that students receive the education they are paying for, the state bases the subsidy not only on the number of students but on the total number of days of attendance, which gives the schools incentives to encourage attendance. To try to promote equality of opportunity, the government also makes it expensive for private schools to charge more than the government subsidies: schools that do so lose all government money, so parents who are willing to pay more for an even better school must pay the entire amount of the tuition.

There is evidence that the private schools are in great demand: while the total number of students in the Chilean school system increased by only 3.5 percent between 1976 and 1980, the number of students enrolled in the subsidized private schools jumped by 31.7 percent. Test scores show that students in these schools receive a better education than those in public schools. Each year the graduating class takes a national, standardized exam, and students from the subsidized private schools have been consistently outscoring the public school students by a statistically significant amount.

Also in the works at the Ministry of Education is a plan to turn over public school administration from national to regional authorities. The Ministry of Education will continue to make general policy, but actual management will be carried out at a local level, where parents have far more input into what is done. More than half the public schools have already been turned over to local management, and eventually all the schools will be in regional hands. Not only should this improve the quality of schools but, by doing so, will spur higher-quality education in the private schools, which must compete with public schools in order to make a profit.

Some critics of the system argue that it is a mistake to leave education to businessmen with profit motives. This argument ignores the advantage of good management, which will look for professionals in education to manage the schools, just as the owner of a baseball team hires a professional coach instead of letting his accountants run the team, and the coach trains the players while the owner takes care of the accounts.

ANOTHER AREA WHERE PRIVATE INCENTIVES are working wonders is the transportation industry. Taxis, intercity buses, and airlines, all heavily regulated six years ago, have been allowed to set their own rates and run whatever routes they choose.

Taxis now abound on city streets. Their number had dropped from some 19,000 in 1974 to 16,500 two years later. But after deregulation in 1978, nearly 24,000 taxis were working the streets, and by 1979 the number had jumped to 34,890. Prices are reasonable, probably even low given the current Chilean price level—$1.00 initial fee in most cities, and about 41 cents for each additional mile.

The most radical of the Chicago boys' moves was their attack on Chile's ancient and monstrous social security system.

Since the number of licenses is unlimited and anyone with a clean record can get one, most taxi drivers own their cabs and use them as private cars when they are not in service. Any car can become a cab; the owner need only get a taxi license and paint the car black and yellow. Taxi drivers are also allowed to operate their cars as jitneys, running an advertised route and picking up passengers like a small bus. Drivers can run whatever route they please, whenever they please, and the resulting taxi traffic accommodates rush hour nicely—with no government planning! When traffic is heaviest, a lot of the cabs put signs on top advertising their routes and operate as jitneys until traffic thins out, when they become cabs again.

In intercity busing much the same free-wheeling adjustment to demand has occurred. Anyone is allowed to buy a bus and operate it between cities at whatever rates he wants to set. Within cities the rates are fixed, but anyone is allowed to run a route. With this policy, the total number of buses operating in the country has risen from less than 16,000 in 1974 to more than 20,000 in 1979, at no cost to the government.

The most modern buses are those that operate between cities, where private enterprise has produced cheaper, more frequent service along the most popular routes. It is safe to assume that a bus will be available from Santiago to the cities of Valparaíso and Viña, about 80 miles away, at almost any hour of the day, and prices are low enough to attract considerable business.

In airlines the effect of deregulation has also been impressive. Formerly, international flights were limited by law to the carrying capacity of Chile's nationalized airline, LAN Chile. Since deregulation, effective in 1979, both the number of companies operating in and out of Chile and the number of flights offered by each company has grown substantially.

Among the international carriers operating out of Chile since the free-skies policy was introduced are Pan Am, Alitalia, Lloyd Aereo Boliviano, and Aereo Uruguay. Argentinians and Uruguayans, whose countries regulate their air industries, have started flying into Santiago in order to save money with Chile's cheaper rates and to take advantage of the new routes. On the national level, seven new companies have become significant competitors in specialized markets, where before almost all traffic was handled by LAN Chile.

Jaime Latorre, a travel agent who works in Santiago, complains that he has had almost too much business since deregulation. "It gives us a problem because we work on com-

It is time for the rest of the world to learn cheaply a lesson that Chile learned only after great expense and much suffering.

mission, and people are using the airlines much more for the shorter, cheaper flights. Those are more work and less money for us," says Jaime. But few of the travelers are complaining, he is willing to admit. "Deregulation created a new market. People who never traveled before are now traveling."

On the low end of the economic scale, Chile has also done a lot in the way of providing the poor with subsidies that maintain work incentives, unlike US welfare plans. Chief among these subsidies is a plan called PEM, a Spanish acronym for "Program for Minimal Employment." PEM was initiated at the suggestion of Chicago boys Kast and de Castro, in 1975, to cope with the worst effects of the unemployment crisis during the recession.

PEM guarantees a job at below the minimum wage to anyone who shows up at the local PEM office in any region of the country. The work usually involves cleaning streets, tending parks, or some similar activity that local authorities need done. While the wages are too low to be regarded as more than supplementary income on a long-run basis, it is a way for the government to funnel money to the poor without taking away their incentives to find more socially productive work at higher wages.

Today the make-up of PEM workers is far different from what it was in 1975; during the economic crisis about 91 percent of PEM employees were men, and almost all of them had worked previously. Today only about 48 percent are men, and most of those working have never held jobs before, which means that PEM has become more of a training ground for employment and a supplementary source of income than a few years ago. Previous participants who had training but were unable to find work have moved on to better jobs, and women, students, and inexperienced workers from other groups receive government subsidies in a form that does not permanently swell the public payroll and does not block the search for better jobs.

PEM has had administrative problems, and one government analyst charges that the distribution of funds has been too loose and budgets are probably padded in some regions, where there is no strict watch over how many people actually work once they have signed up with PEM. Overall, though, the cost of mismanaged funds is probably lower to the country than the cost of permanently maintaining large numbers of unnecessary employees in government service, as was the case under Allende, or the cost of discouraging the search for work, as is the case in the United States.

WHILE THE PINOCHET GOVERNMENT'S economic policies tend to minimize the role of the state and leave as much as possible to the free market, in the area of political liberty its record is another story altogether. State control is loose enough for a group of professors to run a signed ad in a large newspaper disagreeing with government policy and suffer no adverse reaction. People will talk: a casual acquaintance at a soup-stand in the Santiago fish-market criticizes the government at length, even though he adds, "Please don't repeat this to anyone, or I will lose my job."

Socialist activity is severely punished, however, and is expressly outlawed in the new constitution, which was approved by a two-thirds majority in a 1980 plebiscite. It is legitimate to doubt the significance of the figures on the constitutional vote. People are sometimes afraid to say what they think, and there is no question that the press, as one reporter from Santiago's major newspaper, *El Mercurio,* explained, "engages in a lot of self-censorship."

The secret police are active and not always obviously under the control of the Pinochet government. International press services complain that their wires are tapped and antigovernment stories sometimes provoke late-night death-threats over the telephone and impromptu visits from disapproving government officials.

Four dissidents were recently expelled from the country, with no clear evidence against them presented to the public, and without trial. Several thousand Chileans are in permanent exile because of their political beliefs, not allowed to return home while the Pinochet government is in power.

Newspapers would be closed down if they were to run explicitly socialist editorials or calls for overthrow of the government, but they are free to comment on the government's economic policies. The Economic Team has been caricatured and criticized with no government retribution.

Some of the biggest critics of government policy are the very businesses that have benefited most from a free market, in displays of the common sentiment that "competition is good for everyone but me." The private social security companies, not the public, called for price controls on the private pension plans out of fear that new competitors would underprice them and lure away business.

Elections are currently scheduled for 1989, when Pinochet is to propose a candidate for president and allow political parties to organize and propose their own candidates. That date may be too far in the future for the good of the country, as many Chileans say.

The last generation came of age under Allende, and out of that chaos came the Chicago boys and an overwhelming belief that the important work of the time was to cure Chile's economic ills. The current generation is far better off economically; those in college today were just children when people lined up in the streets to wait for bread, and they only dimly remember the armed clashes between left- and right-wing forces in the city streets. For these Chilean youth, the urgent problem is political; restoration of democracy is the important work of their generation. "What Pinochet did with the Economic Team is good," says one business student at a Santiago university, "but it is not good that we have this political system today."

Those on the Economic Team say that the major economic

changes they favor have almost all been put into place. There is talk of deregulation of the first-class mail industry, which may occur this year. But the big problem is to keep the system running with a minimum of government interference and, in the future, to stave off the creep of government regulation that seems inevitable in a democracy. The biggest danger, according to several of the team members, comes from the large state-owned corporations. Currently run by military officers, they provide shells for government interference in the economy that may expand again when Pinochet is no longer in power.

The overall economic picture is gratifying, although it is not the utopian free market that it sounds after a litany of deregulated industries and privatized businesses. Chile still has its share of regulation, and many of the free-market measures have been introduced only after prolonged struggle and negotiation between the Economic Team and other government elements, such as some military officers who favor government regulation of almost every sector. One retired officer explains that the military mentality naturally favors government interference. "For them, the government has always been the source of everything, from policy to supplies to salaries, and they see no reason why that should be different for the rest of the country."

There are still many poor areas, such as this one on the outskirts of Santiago.

Not all military officers share this opinion. The most notable exception, of course, is Pinochet, who has backed the Chicago boys on almost every major policy question. But that backing has been a tricky process, and all policies must be approved unanimously by the four-man junta that governs Chile today.

So the criticism can be leveled that Chile still has an enormous state-owned mining sector, government-regulated utilities, and a many-tentacled bureaucracy that inhabits dozens of downtown Santiago buildings and generates piles of paperwork and bureaucratic delays.

The important thing to remember, however, in evaluating Chile's free-market policies is how far the country has come since Allende, both in terms of opening up markets and in terms of economic growth, which has averaged 7.2 percent for the last five years, while unemployment dropped to 11 percent in 1981 from its peak of 19.8 percent in 1976. By the criterion of economic growth and well-being, the success of the capitalist measures is clear. As University of Chicago Prof. Arnold Harberger said on a recent visit to Chile, "For anyone who comes here with any sense of economics, any feel for how an economy works, it just blows his mind."

Miguel Kast, minister of labor, says the same thing more explicitly in evaluating the work of the Economic Team: "If you do the right things, and do them all the way, the ability of the economy to recover is beyond the imagination of even the craziest economist."

More popular than the criticism that Chile still has substantial government involvement in the economy—and certainly the better known in the world press—is the charge that the current economic system could never have been put in place without the aid of a military dictatorship and should therefore be condemned along with the political system. "The economic policies could not have been carried out without repression," says a member of a prominent antigovernment research institute, who wishes to remain unidentified. "I would love to separate them, but you can't do it."

This same criticism is repeated over and over again, from a professor at the State-run University of Chile, where a general heads the faculty, to a successful businessman who studied economics at Chicago along with the government team. Many members of the Economic Team agree that they could not have gone as far with most of their policies in a democratic state.

Yet consider: whether a man takes medicine voluntarily or at gunpoint does not affect the medicine's ability to kill or cure. The case to be made is not that dictatorship is necessary for a truly free market or that the two are inextricably linked in Chile's case, but that Chile's dictatorship chose an economically successful path—something that cannot be said for such dictatorships as Cambodia, Argentina, or Cuba.

The world could profit more by looking at Chile's economic system as an example of the power of free markets to aid an economy than by condemning wholesale anything associated with the Chilean dictatorship. While it might have been impossible to vote in many of the Economic Team's policies in Chile, it may be possible in countries more predisposed toward free markets, such as the United States.

Chile undeniably has a long way to go to restore political liberty. It is still a considerable distance from the level of economic development possible for a country with its rich natural resources. Yet a lot of work and courage and plain economic sense has gone into taking it from the politically chaotic, economically catastrophic Allende era to the current level of economic growth and stability. It is time for the rest of the world to take a look at how much free-market policies can do for a country and to learn cheaply a lesson that Chile learned only after great expense, much suffering at home, and widespread condemnation in the world press.

There is more here than a cloud with a silver lining. There is a gold mine of economic information. ◻

Claudia Rosett recently completed a master's degree in business administration from the Graduate School of Business of the University of Chicago. She is, with coauthor Daniel Gressel, writing a book on Chile under a grant from the Manhattan Institute for Policy Research.

High-Tech Freeze-Out

An R&D specialist tells how government policies make life tough for the independent innovator

By D. G. Soergel

"THE INVENTOR" is firmly entrenched in American folklore. From Eli Whitney to Thomas Edison to Bill Lear, the history of technology is peppered with colorful cases of individuals who tinkered and toiled to bring to fruition their ideas for new or better products and ways of doing things.

Yet many Americans remain unaware of just how important such inventive entrepreneurs are in our high-technology era. Yesterday we had Alexander Graham Bell and today we have Bell Labs; with increasing technological complexity, it is perhaps natural to conclude that the corporate giants, with funds and personnel at their disposal, must be responsible for major innovations. The fact is, though, that small businesses can claim a disproportionate share of technological breakthroughs. Unfortunately, it is also a fact that, in spite of much ado about regaining America's competitive edge in the world of high technology, federal policies serve to discourage rather than encourage inventor-entrepreneurs' striking out on their own.

The Reagan administration has effected a host of measures aimed at stimulating business investment and revitalizing the economy. It has reduced the tax rate on interest and investment income, from 70 to 50 percent over a three-year period, to make private capital increasingly available for productivity improvements and for developing new products. It has pushed for a more predictable money supply to encourage long-range capital investments. It has moved toward an economy uncluttered by nonproductive, senseless regulations. But are these reforms enough to revitalize the nation's economy?

Conspicuously missing from this grand strategy is any attention to America's inventive entrepreneurs. Such entrepreneurs do not work to develop innovations favored by some corporate or government committee. Nor do they seek to duplicate the successes of long-forgotten entrepreneurs by setting up new businesses in now-familiar areas, such as new cleaning and auto-service establishments. Instead, what these special entrepreneurs do is pursue their own ideas, setting up shop, when they can, to develop and bring to market new products and processes. And in spite of all of the Reagan administration's tax, fiscal, and monetary reforms, these special entrepreneurs who hope to advance their economic positions by venturing their own ideas are still left "slowly twisting in the wind" by an almost invisible combination of federal tax, research and development, and procurement policies.

ESTABLISHMENTARIANISM

Take the tax code, for instance. Before making out their checks to the IRS, established firms can write off new-business costs. From revenues gained from their existing products and services, these firms can deduct costs for research, development, and marketing of new ventures. Our special entrepreneurs cannot. Not yet in business, and thus without sales income, they have no choice but to draw from their personal *after-tax* equity to advance their ideas far enough to attract outside investment.

In fact, one Reagan administration tax reform starkly reinforces the tax code's basic inequality between those already in business who hope to profitably expand their businesses and others who hope to profitably go into business and pursue their own innovative ideas. This is the newly legislated R&D tax credit. It makes more generous the tax deduction for new-product costs—a boon for ongoing businesses, but a meaningless tax credit for entrepreneurs not yet in business.

By favoring business expansions over the start of new enterprises, the tax system promotes venture inequality before the law. Large, often-stagnated firms are thus shielded from entrepreneurial challenges, which can hardly be helping the economy or the US world trade position.

In spite of the venture inequality ingrained in the tax code, "small-time" innovators have, historically, been very important in the nation's economic success. In recent decades, however, the tax favoritism has been exacerbated by two administrative policies that lay hidden in bureaucratic complexity. Combined with the tax code, they virtually put America's innovator-entrepreneurs out of the business of going into business.

During fiscal 1981, federal R&D policy governed $35 billion and procurement policy $110 billion of our tax money. (This doesn't even count $30 billion spent on procurement under assistance programs.) These two nonlegislated policies support a vast array of innovations aimed at public and private markets.

Precisely which innovative ideas should be selected and followed up, and how far into innovation should each be carried by government spending our tax money? To an exploratory, prototype, or production position? These critical decisions face the government once it begins dispensing R&D monies. The answers lock in the characteristics and prices of future goods and services. The decisions are not made by independent, competitive investors who stand to lose or gain a great deal by putting up venture capital; they are made by monopolistic agency committees.

Fiscal 1981's $35-billion federal R&D budget put directly under government control as much research and development money as was independently spent by all US companies to competitively develop their own ideas for new goods and services. Nearly $15 billion of this amount flowed back to industrial firms governed by federal procurement policy. But this policy places more value on proposals offered by established firms—especially government contractors—than on proposals offered by entrepreneurs who are not yet government contractors but who hope to be, based on the attractiveness of their ideas.

Evidence of past innovative successes, ownership of R&D and production plants and equipment, and access to credit are all valued more highly than are ideas during risk-averting agency committee selections for R&D contract awards. Entrepreneurs don't yet have evidence of any of these, and few can afford to propose ideas to federal agencies regardless of special "small"-business favoritisms found in government's statutory codes and administrative procedures. These favoritisms may boost the fortunes of existing firms with 500 or fewer employees, but they do nothing for inventor-entrepreneurs who are not yet in business.

What it comes to is that the federal procurement system, including its small-business rules, faithfully captures the business-expansion favoritism promoted by the tax code and reinforces the risk-averting tendencies of bureaucracy. This is no mere speculation: over 95 percent of 1981 R&D funds distributed under federal procurement policy went to long-established firms. It is not necessarily that they propose better ideas; they are simply better risks.

INNOVATIVE CHOICES

What is the object of all the R&D support from government? A major share of the $35 billion nationalized, new-product "seed" capital—about $21 billion—was spent by federal agencies to select and bring to production ideas that were

Illustration by Doug Medved

aimed solely at their own agency markets. There is literally no other domestic buyer for the products of their R&D expenditures.

New weapon and space systems are the most obvious examples. They are purchased domestically only by NASA and the Defense Department. In this "single buyer" situation, government taxes all income earners for the experimental money, explores alternatives ideas, and finally purchases and operates a preferred choice, such as the nationalized space shuttle and MX missile. A much smaller amount of taxpayer-financed R&D is similarly spent to select and explore innovations for the nationalized air traffic control and Coast Guard systems.

The remaining $14 billion of fiscal 1981 government R&D funds was spent on scientific research, purchasing R&D plants and equipments, and selecting and partially innovating an array of ideas that were not aimed solely at agency markets. They were aimed instead at widely diverse, private, commercial and industrial markets—at private energy markets, transportation markets, housing markets, and antipollution markets, among many others. Later, our vaunted "capitalist enterprise" system will fully develop and produce whatever it was that government had earlier decided was "best" for all the rest, with profit gained at little risk to the companies' shareholders, with venture cash-flow provided by taxpayers, and with no ownership dilution demanded in return for taxpayer risk-taking.

Government's risk instruments—R&D contracts, grants, and a new gimmick called a "cooperative agreement"—cannot be matched by Wall Street's bonds, commercial loans, and equity stocks. Unlike government's risk instruments, Wall Street's are offered to the innovator only in exchange for taking on debt, diluting ownership, or mortgaging assets.

When government intervenes in the economy with its unmatchable risk instruments, entrepreneurs, firms of all sizes, and universities and other nonprofit institutions will swarm to Washington like bees to honey. By drawing researchers and inventors to the US Treasury this sweet flower of taxpayers' money centralizes science, technology, and venture decisionmaking within the benign and noncompetitive environment of bureaucracy, politicizing decisions critical to our economic future.

HIDDEN MONOPOLIZATION

A look at two government reports—one from the National Science Foundation, "Federal Funds for R&D" (1981), the other from Congress, "Investigative Report on Utilization of Federal Laboratories" (1978)—shows how the centralization of science and technology results from its R&D funding decisions. Putting together the data from these two reports, one finds an otherwise hidden "university-agency complex" that monopolizes the seed capital needed by innovative entrepreneurs to start new firms. The university-agency complex consists of universities, federal agency laboratories, nationalized laboratories, and technical elements of state and local governments; plus universities, other nonprofits, and industrial firms that administer and operate government-owned R&D facilities, such as the Sandia Nuclear Laboratory operated by Western Electric and the Livermore Nuclear Laboratory operated by the University of California.

The bigger the firm, the smaller the risk for government decisionmakers.

Established industrial firms benefit handsomely from this arrangement because they gain basic and applied scientific knowledge useful in their commercial ventures, without risking shareholders' profits or capitalizing the needed R&D plants and equipment. The NSF report shows that 10 major companies benefit in this fashion, as do 20 major universities.

The university-agency complex has a centroid of nearly 800 nonprofit laboratories that employ over 100,000 scientists and engineers. When we add technicians, other supporting personnel, and administrators, nearly a quarter-million people are funded by taxpayers to homogenize the nation's science and to start new ventures that they are not accountable to finish.

Every year their sponsoring federal agencies award to private members of the complex noncompetitive R&D contracts or grants to finance their operations. The agencies also purchase expensive R&D plants and equipment for their "free" use. In addition, the US Treasury directly covers the operating costs of nationalized and agency laboratories.

Here is how government's $35-billion R&D expenditure was distributed in fiscal 1981. Federal agencies spent $2 billion to purchase R&D plants and equipment for their own and nationalized laboratories and to purchase government-owned R&D plants and equipment for "free" use by universities, other nonprofits, and industrial firms. The remaining $33 billion was spent on research and development activities, with 54 percent ($17.8 billion) going to the university-agency complex and the remaining 46 percent ($15.2 billion) to profit-incentive firms.

This may seem like a fair enough split of taxpayers' money between profit and nonprofit organizations—unless we go a bit further and ask just what "kind" of R&D was distributed to each. The National Science Foundation report addresses this. The university-agency complex received about $10 billion in research funding, both basic and applied; industry, about $2 billion. Industry, however, received about $13 billion in development funding. Yet the university-agency complex garnered $8 billion in development funding, which means that it is very much in the business of bringing its own favored ideas all the way to production positions.

THE BIG GET BIGGER

The distribution of the federal R&D budget leads to an inescapable conclusion. The university-agency complex, by its dominance in taxpayer-supplied research funding, goes a long way, if not toward nationalizing, at least toward homogenizing, the nation's science and technology. This complex is in the business, not only of deciding what scientific research is pursued, but of starting new ventures it deems best for all the rest. By means of the federal procurement system, the complex will later transfer these partially completed ventures to profit-making firms for prototyping and final development. And the bigger the firm, the smaller the risk for agency decisionmakers and hence the more likely to be selected for development.

These data have ominous implications for inventors not yet in business for themselves but hopeful of going into business to advance their own economic positions—our entrepreneurial community. If, for example, you have come up with an idea that you believe is responsive to a national need, such as energy independence, and you hope to benefit by

profitably introducing it into commercial or industrial markets, you would be at a severe competitive disadvantage compared to those who are in a position to tap the US Treasury for the needed seed capital.

This distorted situation extends even into Uncle Sam's own markets for weapon and space developments. Established weapon and space system contractors, regardless of size, are indirectly paid their costs for independent research and development, as well as for preparing and marketing new weapon and space system proposals. These new-business-getting costs appear as price mark-ups on their current weapon and space system contracts. These costs are also tax-deductible.

For example, during 1979 the Defense Department's 93 largest contractors out of a total 24,000 separate suppliers were aggregately paid over $1 billion to perform research and development and to prepare and market new weapons proposals. These costs were recovered as price mark-ups on $33 billion weapons contracts awarded to the 93 contractors during 1979. And because these costs are tax-deductible under the tax code, these firms saved nearly an additional $500 million. In brief, these 93 weapons contractors aggregately enjoyed a $500-million tax advantage over their nonestablished, entrepreneurial counterparts. Entrepreneurs who are not yet federal contractors but hope to be are behind the eight ball right from the beginning. They have no choice but to draw from their family *after-tax* resources to first prove what they propose to prove. It's a classic Catch-22. Most entrepreneurs go broke if they are foolish enough to try. Those who do try often later find that their ideas have been absorbed into the university-agency complex or incorporated into procurements that only large, capitalized contractors are qualified to bid on, simply because they already own the "machinery" needed to innovate them.

We see in this the intimate ties between nonprofit, taxpayer-supported scientific and technical organizations that start new ventures and the R&D and production plants and equipment owned by established firms that are needed to finish them. America's inventive entrepreneurs stand on the outside looking in as this connection does its work—which doesn't always work.

For example, after partially innovating a standard city bus, the Department of Transportation found that no foreign or domestic bus manufacturer was interested in finishing it. We, as taxpayers, dropped over $50 million on this aborted venture, financing the university-agency complex while it struggled with the mysteries of economic bus design. And most are familiar with America's supersonic transport fiasco. Taxpayers sank nearly $1 billion into that one—but no company went out of business because of it, nor did the sponsoring Federal Aviation Administration.

Many other examples can be found of ventures started by the university-agency complex but never finished; yet its operations continue to expand, and its employees' salaries and benefits continue to increase. This is because the complex is immunized from the competitive challenge of new ideas and innovations; there are no marketplace checks-and-balances on its growth and extent of operations.

Regardless of the Reagan administration's economic reforms, the powerful combination of the tax code and federal procurement and R&D policies makes "Yankee ingenuity" and "America the land of opportunity" the stuff only of nostalgia. They are not today's realities. People can no longer put much store by venturing their own ideas in order to advance their own economic positions. Government has blunted such hope and ambition. Inventors are thus steered toward employment by existing firms or by the university-agency complex as their best opportunity for advancing their own ideas beyond personally affordable positions. Hence, big firms get bigger, economic concentration grows, diversity of consumer choice narrows, economic freedom diminishes, competition wanes, America's world trade position worsens, and the nation's economy deteriorates.

R&D INNOVATIONS

The Reagan administration could turn this situation on its ear—and further its budget-cutting goals—by redirecting the $14 billion in civilian R&D funds that lies buried in the R&D accounts of 37 nonspace, nondefense federal agencies. Returning a major portion of this vast amount of new-enterprise seed capital to private capital markets whence it came would substantially improve entrepreneurs' chances for finding individual investors and advancing their ideas beyond personally affordable positions. If federal agencies are to help rather than hinder an economic recovery, they must look to incentives that motivate private inventors, investors, innovators, and consumers to achieve that goal. To nationalize the means to such an end by centralizing R&D can only lead to a cloned society where goods and services, and their prices, are the same for everyone, dictated by bureaucracy.

Then there is the military-industrial complex, labeled as such by President Eisenhower more than 20 years ago. Policies governing the $21-billion R&D for new weapons and space systems ought to be radically reformed. Today, taxpayers are forced by such policies to protect the market positions already held by established weapon and space system suppliers. Existing R&D and procurement policies further entrench the econonomic concentration of the aerospace industry evident since World War II, when winning the war at any cost was all that mattered.

Nonetheless, while these moves are necessary, they are not sufficient to revitalize the nation's economy. That requires venture equality before the law. Federal tax, procurement, and R&D policies must be massively overhauled such that all, ongoing businesses and individuals alike, stand equally before federal laws and administrative policies when hoping to advance their economic positions by venturing their own ideas—whether these ventures are aimed at profitably expanding an ongoing business or at establishing a new, profitable enterprise; whether they are initially geared to private or to public consumer markets.

The key to achieving venture equality before the law for everyone is for Congress to understand fully that the cost of "getting" future business is a cost both for ongoing businesses that hope to expand and for entrepreneurs who hope to advance their ideas far enough to attract outside investment. Whether an ongoing business or an entrepreneur, the aim is to "get" future business by innovating their own ideas. Both ought to be treated equally before the law.

Ideas are created by people, not by organizations, a fact unfortunately not recognized in public policy. Organizations, however, are required to advance ideas to market; and America needs more new, innovative organizations. The American people have never been short on ideas.

Basic public policy changes in the present, cozy R&D arrangement will surely be resisted by the university-agency complex and by corporate business associations. But we ought to start before it's too late, before individual economic freedom and liberty also become the stuff of nostalgia. ◻

David G. Soergel is president of DGS Associates of Potomac, Maryland.

Mint Condition

(Continued from p. 30)

pence piece. Though the new coin was about the size of the 10-pence, it was impossible to confuse them.

There existed other alternatives, as well. For example, the Mint could have coined the Anthony with a central hole, as European nations made nickel coins years ago to prevent confusion with silver currency. The list of nations that have successfully used square, perforated, or odd-shaped coins, for a modern economy, would extend for a full page. The Mint during the Carter administration, however, could not follow that idea in getting a practical dollar coin to the public. Instead, it suggested staining the coins purple, so they wouldn't look like quarters. (Naturally, people could also distinguish the dollar by its purple color as they groped for one in the dark, right?)

Instead of choosing alternatives that would make a mini-dollar practical, the government merely continued to push its quarter-like coin. It unsuccessfully tried to force it on the public through the Postal Service. It also paid American troops overseas with it. The GIs found that they could convert it to foreign currency only at a heavy discount, but it took congressional pressure to stop finance officers from forcing the pariah coin on a captive clientele.

Justifications for a dollar coin stem largely from inflation. The dollar doesn't buy what it used to and therefore may not merit a bill form. A similar problem has plagued the one-cent piece. Here, the Mint Bureau has dragged its feet so that for the past few years, the nation has had a penny shortage, and the coinage mints have had to strike billions of pennies that only go into hoards.

In 1974, when copper prices threatened to force the penny out of production, the Mint secured congressional approval for an aluminum cent. Although aluminum would have provided a substantial cost saving, even in times when copper has been less than 80 cents a pound, the Mint did not pursue that course. Five years later, when copper prices again hit record levels, the Mint had the same problem of trying to keep the cent in circulation. By the middle of 1981, it was considering a zinc cent with a thin copper plating, which would look similar to the familiar penny. In the interim, it has struck billions of copper coins that leave the Mint and go into hoards, as many people believe that copper will skyrocket in price.

A few years ago, the Mint Bureau hired a private consulting firm to tell it how to handle the country's coinage needs. One conclusion was that the cent should give way to a two-cent piece, because a penny now buys practically nothing. Yet no consideration was given to the historical fact that had forced the two-cent piece out of production over a century earlier: two one-cent coins are more practical in making change than is a two-cent piece.

The whole Treasury outlook seems reminiscent of a cartoon showing the writer Henry James surveying the world—peeking warily through the crack of his front door. The Mint Bureau, which supposedly is responsible for meeting the demands of real, everyday commercial life, has instead moved even more deeply into the ivory tower.

In February 1980, Mint Director Stella Hackel-Sims announced a halt to "Agony dollar" coinage, less than eight months after the new coin had gone out to the public. The Mint had managed to change an idea for improvement into a multi-million-dollar waste. But to anyone familiar with the Mint's history, the response was, "What else is new?" ◧

The late Ray Young was a numismatics buff and assistant editor of Commodity Journal *until his death last fall.*

Fingers Talk

(Continued from p. 31)

Schiller formed Fingermatrix, Inc.

During the past five years, the company has at times been very strapped for money. In its development stage, the business lost some $4 million. There were across-the-board pay cuts for its 20 employees back in 1979, almost sinking the show. But in 1980, Schiller and his people came up with the goods: they have perfected an intelligent scanning system that can search out unique characteristics of fingers placed on a deformable plate. The machine digitizes the information for computer processing and compares its reading with filed information.

Chase Manhattan and the First National Bank of Chicago have bought trial machines, which are being used to control and record employee access to vault areas and computer files. The banks are quite enthusiastic. They say the machines are amazingly reliable and accurate. Some Fingermatrix machines are now being used to control and record who gets into a computer system.

Soon, Fingermatrix will be offering banks a system for use in their automatic teller machines. Marketing director Harold Buchanan waxes eloquent on the advantages of being able to throw away your plastic card and "take your fingers" to the bank machine. Meanwhile, the company is getting orders for identification systems from the US Air Force and the Defense Intelligence Agency. The prospects for Schiller's little enterprise now look good.

Schiller's Fingermatrix was one of the lucky small businesses that did succeed. And with their success come widespread benefits: businesses with 100 or fewer employees created *four-fifths* of the new jobs during the 1970s, according to a recent study by a group at the Massachusetts Institute of Technology. And a large part of America's export income derives from the ability of entrepreneurs like Schiller to meld technological, marketing, and production imagination to develop clever new machines.

For each success, however, there are others that fail. And increasing regulation and high taxes only add to the rate of failure. Free of these governmental weeds, the flowers of entrepreneurship—as evidenced in the blossoming of Michael Schiller's enterprise—could more fully grow in America's economic garden. ◧

Peter Samuel is the US manager of Australian Consolidated Press. He writes a weekly column for ACP's news magazine, the Bulletin.

COMING ATTRACTIONS

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VIEWPOINT

Hung Up for a Day

BY JAMES DALE DAVIDSON

If you were looking the other way you may not have noticed it, but the federal government actually closed for one day just before Thanksgiving last year. Congress and the president could not agree on funding levels for emergency appropriations to keep the federal establishment running; so on Monday, November 23, the maintenance people came out and started padlocking federal buildings. All but "essential" government employees were sent home.

In other parts of the country, this probably was not a big story. Everyone knew from the beginning that the government was being closed as a polite exercise in political gymnastics. It was only a matter of hours, a day at the most, before an agreement would be reached and the bureaucracy would be back at the same stand, as fat and prosperous as ever.

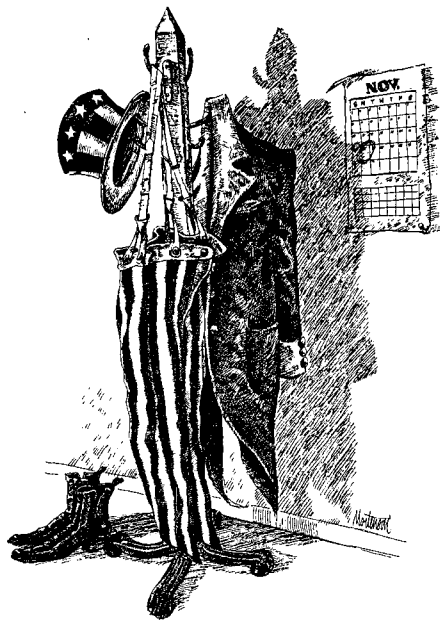
In Washington, however, which is before all else a company town, the news media treated this mock closing of the government with the same sort of earnest excitement that the news media in Los Angeles would devote to a high-octane earthquake. Or folks in Chicago would display if Mrs. O'Leary's cow came back from the dead, kicked over the lantern, and burned the city down again. Television and radio stations ran constant bulletins and up-dates, with on-the-scene reporters calling in breathless accounts. "They're actually closing down the Department of Interior now."

Reporters interviewed scores of angry bureaucrats as they streamed out of downtown offices. Most of them gave the impression that they had been personally savaged by the budgetary impasse. Almost all blamed the president. They might, with equal logic, have blamed Congress, but of course they didn't. Congress was holding out for a higher spending level than the president was.

Having witnessed this whole event at close hand, I was struck by a number of points:

1. Even though the government did, in fact, close, nothing much happened. It is not, after all, urgent necessity that brings us to maintain this far-flung federal establishment. Even with no time to make adjustments, we could, in a pinch, get by with a fraction of the current federal work force. We did without them for a day. Perhaps we could get by for a week. Or 10 days. That would surely involve some inconveniences, but in a time of uncontrolled deficits and budgetary crisis, why not close the government one day each month for the next year?

2. Only a fraction of the current government payroll is said to be "essential." It seems at least plausible that we could do without many of these non-essential employees altogether.



3. The fact that we could trim the federal establishment doesn't mean for a moment that we will—even under the administration of a president who is as tight-fisted and has as much experience with low-budget productions as any who is likely to come to the White House. In the end, the money is always restored. The bureaucracy gets its way. This is so as a simple matter of incentives. In government, any party that takes the lead in reforming the civil service so as to reduce employment opportunities for bureaucrats will lose the votes of those who lose their jobs (along with the votes of all those persons whom they can influence). Losing votes is not an attractive proposition to politicians, which is why the bureaucracy sails on under conditions organized more or less to suit the bureaucracy.

4. The above reason is why we have a strange law on the books: this may come as a surprise to many, as it did to me, but it is currently illegal for a federal employee to volunteer his time and effort for the benefit of the agency for which he works. This is no doubt a good way to guarantee the hiring of more federal employees, but it is ironic that, when the Reagan administration is seeking to stimulate volunteerism in the private sector, the laws of the land prohibit federal employees from volunteering their effort to the achievement of goals that they loudly proclaim to be quite important.

The closing of the government for one day brought home how hard it is to make significant budget cuts in the ordinary political way. I was reminded of the old television program *Queen for a Day.* The show always featured some hapless mother of six children whose husband had fallen under a bulldozer. For one glorious afternoon, they put a tinseled crown on her head, gave her a new toaster, and took her out to dinner. The next morning, she was back to the same hard life she had known, burdened with the additional difficulty of having fallen behind a day in the housework. Such is more or less the position of the taxpayer in today's world. Government was cut back for a day—but it was too good to last.

Footnote: Guess how many federal government employees were laid off in the first year of Reagan's presidency? You might think from the great commotion over budget cuts that half the civilian employees in government had been fired. Not so. According to a final tally prepared by the Office of Personnel Management, the first year of Ronald Reagan's budget cuts resulted in lay-offs for 2,840 federal workers. In an ordinary year, 10-12 percent of federal jobs are opened through attrition. In this calendar year, the government attrition rate fell to only 8.2 percent (which amounts to about 160,000 vacancies). So the loss of 2,840 jobs represents only a tiny fraction of the numbers leaving the government anyway. The number of jobs eliminated amounted to about one-tenth of one percent of total federal employment. Big deal.

Jim Davidson is founder and chairman of the National Taxpayers Union and author of The Squeeze.

Illustration by Denis Mortenson

The Great Sugar Debate

BY DURK PEARSON AND SANDY SHAW

Sugar has become a scare word to many people, while others continue to use it but wonder whether they are harming themselves. You *can* eat sugar in a responsible manner—if you understand *why* sugar can cause problems when used excessively.

Sucrose, or table sugar, tastes good to most people and to most animals as well. Raw sugar, brown sugar, beet sugar, and cane sugar are all composed largely of sucrose. Recently, many books and articles have claimed that sugar is literally a poison and should be avoided like the plague. It is being blamed for heart disease, diabetes, and many other conditions. What are the facts about sugar? Must we avoid it, or can we use it in moderation?

When we eat sugar, insulin is released into the bloodstream. Insulin is a potent hormone required by most cells to remove sugar from the bloodstream and utilize it for generating energy.

Insulin has many far-reaching effects beyond this necessary function, however. It has been shown to cause lipids (fats) to be deposited in arterial walls, and it increases fat storage in adipose (fatty) tissues by stimulating the synthesis of lipids and inhibiting their breakdown. It is also known that diabetics who are able to control their blood sugar levels by dietary means, rather than by taking insulin, may avoid most of the complications suffered by insulin-using diabetics—cardiovascular disease, blindness, etc.

Insulin also blocks the actions of growth hormone, which is necessary for proper function of the body's police force, the immune system. The decrease in output of growth hormone by the brain's pituitary gland with age is thought to contribute to the increased incidence of cancer, heart disease, and infectious disease with increasing age.

Sugars are not equal in their abilities to release insulin. Glucose (grape sugar) releases the largest amounts of insulin most rapidly. Sucrose (cane, beet, brown sugar, part of honey) is next. Fructose (fruit sugar, corn syrup, most of honey), releases insulin more slowly; however, it may elevate serum triglycerides more than sucrose does. Xylitol, sorbitol, mannitol, and inositol do not release or require insulin.

Of course, artificial sweeteners such as Aspartame®, cyclamate, and saccharin do not release or require insulin either. With the exception of children with the genetic defect PKU, who should not use large amounts of the amino acid phenylalanine that makes up part of Aspartame®, we consider any of these artificial sweeteners to be at least as safe as sugar for normal people and to be far safer for the obese and diabetic.

It is possible to reduce lipids in the bloodstream and to reduce their deposition in arterial walls with nutrients such as *niacin* (3 grams per day in one study reduced serum cholesterol by 25 percent and triglycerides by 30 percent in human subjects after only two weeks), and *vitam* (0.5 gram three times a day reduced cholesterol by 35-40 percent in a human clinical trial).

Warning: If you use the acidic forms of either vitamin C or niacin in quantities of a gram or more a day, you should neutralize the acidity with baking soda or (if you are on a low-sodium diet) a non-sodium-containing antacid recommended by your doctor. This is important because it is possible for gastrointestinal damage to occur from megadoses of these vitamin acids without there being noticeable pain or discomfort. Acid vitamin problems can be minimized by taking them immediately after meals.

Excessive ingestion of sugar can lead to reactive hypoglycemia. When eaten, sugar stimulates the release of insulin. Insulin has a much longer half-life in the bloodstream than sugar does (it takes much longer for the insulin than for the sugar to decrease by half). When the excess sugar is used up, insulin is still circulating in the bloodstream. This insulin burns more sugar and can keep blood-sugar levels abnormally low for hours after the original sugar was eaten.

It has been found that certain sulfur-containing compounds, such as the nutrient amino acid cysteine, are able chemically to deactivate the insulin molecule (by reducing one or more of its disulfide bonds). A combination of *vitamins B-1, C,* and *cysteine* is a very effective remedy for reactive hypoglycemia and its unpleasant symptoms. One gram of B-1 and of cysteine and 3 grams of C would be a reasonable dose for a healthy adult.

Insulin can block the effects of a vital hormone, growth hormone, released by the brain's pituitary gland, about an hour and a half after we fall asleep. This hormone is essential for optimum function of the thymus gland (located behind the breastbone), the master gland of the immune system.

It is the thymus that instructs certain white blood cells, called T-cells, which entities in our bodies to consider foreign and, therefore, to locate, kill, and eat. If the thymus fails to give proper instructions (which can happen when there is inadequate growth hormone), the T-cells may not kill a cancer cell in your body or they may make a mistake and attack some of your own cells (which happens, for example, in rheumatoid arthritis).

The T-cells also activate other white blood cells called B-cells that produce antibodies. An error here means poor antibody defenses against infections or even antibodies against your own tissues. It is important that sucrose (table sugar in all its varied forms, as listed above) and other insulin-requiring sugars *not* be eaten within a few hours of bedtime so that the release of growth hormone is not inhibited by insulin.

The problem of sugar-stimulated dental caries may not necessarily be a serious one because of the availability of prescription phosphate-fluoride mouthwashes (an example is Hoyt Phos-Flur®), which are capable of preventing cavities and even repairing small ones if used regularly. The organism responsible for most decay is *streptococcus mutans,* for which a vaccine has been developed. If the vaccine is ever able to pass the FDA gauntlet, the ultimate solution to dental caries will be upon us.

One sugar problem that is not due to eating sugar is false readings in clinical laboratory blood-sugar tests, caused by large doses of vitamin C and other anti-

(Continued on p. 58)

We invite questions of general interest from our readers. Send your query along to REASON Health & Welfare, Box 40105, Santa Barbara, CA 93103. (A limited number of reader questions can be answered in print; personal replies cannot be made.)

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What to Do through '82?

BY STEVEN K. BECKNER

As the US economy becomes more complicated and unpredictable, thanks in part to political vicissitudes, investment strategy is also becoming more difficult. The locus of most of the uncertainty (and the compass of nearly all markets) is interest rates. The ubiquitous price/yield of money, more than any other factor, determines the general direction of stocks, bonds, commodities, currencies, and real estate. And no one really knows where they're going.

Henry Kaufman, the sage of Salomon Brothers, thinks he knows, and everyone on Wall Street listens to him. He says interest rates are headed back up to their previous record levels or beyond, having fallen nearly 5 percent from their summer 1981 highs at one point in December.

Others, including this columnist, disagree. Kaufman's prognosis "just doesn't compute," asserts William Miller, vice-president of Crucible Securities in New York. "If the market is going to hell in a handbasket because we're going into a recession, how in hell can interest rates go up?"

So much depends on government economic policy—in particular, the interaction of fiscal and monetary policies. If fairly conservative projections of a $100-billion fiscal 1982 budget deficit and a $150-billion fiscal 1983 deficit come true, then seemingly almost any method of financing them will tend to put pressure on interest rates, other things being equal.

Strict reliance on the private capital markets by Treasury, which could drain off at least one-third of available private capital, would, in simple supply and demand terms, tend to drive up rates. But even resorting to the accommodative open-market facilities of the Federal Reserve would not guarantee lower rates. Indeed, the inflationary expectations that would result from Fed money creation might drive interest rates higher than otherwise.

It now appears that the Fed—which, despite a few lapses, has done an admirable job of reducing monetary growth and thereby laid the groundwork for both lower inflation and lower interest rates—will not fully accommodate the Treasury's financing needs. Naturally, it will come under increasing pressure to do so. If Paul Volcker and company do hold a steady course, and if other pieces fall into place, then it is likely that the upswing in rates early in '82 will prove temporary.

For one thing, because of the recession, private credit demand is off and should further decline. Then, too, there is every reason to expect that the private savings rate—now at a disappointing 4.9 percent—will increase throughout the year, although it is unlikely to approach the administration's goal of 8 percent. Finally, it is unlikely that the budget deficits will come in as high as projected. There will be more spending cuts and, unfortunately, new taxes.

By year-end, the beginnings of economic recovery should begin easing the deficit strains for fiscal 1983, although the revival of private credit demand at that point should give a fresh boost to interest rates. With this admittedly debatable forecast in mind, what is the outlook for various investments?

Stocks: For the better part of the year, general market conditions look bearish. This is particularly true of the Big Board—the "blue chips," The Dow Jones index could dip to 700. Shorting the shares of large, heavily institutionally held companies should prove profitable. But don't be greedy. Ride them down a few points and get out.

Use your profits to buy up some of the promising second-tier stocks, many of which are at attractively low prices. Look at up-and-coming companies involved in data transmission, laser technology, robotics, and the like. On foreign markets, even companies in rapidly growing areas, especially the Far East, have been hit by worldwide recession. Selective purchases of foreign securities—or foreign unit trusts—look good for long-term growth.

Bonds: Assuming an eventual decline in interest rates, bonds may soon be due for a long-awaited rally. Miller suggests buying 20-year, high-grade, deep-discount corporate bonds with open and active sinking funds. Bonds issued 10 years ago at 6 percent must now be sold at a 50-percent discount to compete with newer issues. Therefore, according to Miller, you can buy $1,000 worth of bonds at $500. You can hold until maturity for a long-term capital gain or sell out at the market when lower interest rates increase the value of the bonds.

Commodities: Commodities have been hit perhaps worse than any other investment by recession, disinflation, and to an extent, tax-law changes. It may be some time before we again see the kind of wild bull markets of the last decade—unless the Fed reverses course and revives inflation. But the coming economic recovery should give a profitable lift to all kinds of commodities; for example, lumber, copper, silver. Gold, for now, should be relegated to relatively small cash positions as the ultimate hedge. Since we don't know when the recovery will come, the best tack is to buy positions in distant delivery months, then watch and wait.

Currencies: Right now the dollar is the reigning king of the hard currencies, blessed by declining inflation and relatively high interest rates, giving it the highest real yield around. But as interest rates come down, the dollar's edge will dull, particularly if inflation begins to rise again. Although the European currencies and the Japanese yen made a recovery in the fall, they have since slipped back. They are all far below their 1978 highs and must be considered undervalued. As the Polish crisis recedes from memory and as the European economies gradually pick up steam later this year, the Euro-currencies should gain. The yen has better immediate prospects.

IRAs: Before signing off, a few obligatory comments on the latest rage—Individual Retirement Accounts. There are three prime considerations: How far are you from retirement? How much taxes will you really save? And what else could you be doing with the money?

IRAs probably make sense for a good many people, but beware of locking your earnings away over a long period of time in instruments that may or may not fare well in the uncertain financial environment of the future. The best route is a self-directed plan or a plan that will allow you to shift among mutual funds to get the best available return.

Steven Beckner is a free-lance financial writer, the assistant editor of World Money Analyst, *and the author of* The Hard Money Book.

Ringleader of a Rider Revolt

BY PATRICK COX

Jewell Thompson got mad. For years she had paid a five-cents-a-gallon gasoline tax earmarked for the Chicago-area Regional Transportation Authority. She finally got a chance, early in 1981, to use the commuter trains into Chicago when she took a job with one of the country's largest rehabilitation institutes, the McGraw Medical Center. The fare was about $50 a month. Four months later it was raised to $67. In midsummer another jump brought the price of a month's rides to $105. "And that's when I said, 'Hey, this is crazy,' " she recalls.

So what can one person do? If that person is Jewell Thompson, one person can save commuters more than $200,000 and lose the RTA upwards of $500,000 month after relentless month. It's not nice to mess around with Jewell Thompson.

When the fare reached $105, Thompson and her friends started talking about car pooling, but several were pregnant and there was some question about insurance. Then Thompson looked into leasing a van. With six people who had been paying $105 each, it would have been easy, but there still would have been insurance and parking costs.

Thompson then started thinking about a bus. As youth director of her church, she had experience renting buses for field trips and knew that school buses could be had for very reasonable rates when not in use ferrying school children. She contacted several bus companies who said they would think about using a school bus to transport commuters and get back to her; but they never did. "Now they regret it," she laughs her wonderful, infectious laugh.

Finally, a company agreed to help her, and a meeting date was set. Word of mouth brought 60 people to the meeting, with enough commitments to rent two buses. At the second meeting, there were enough for four buses; by a fourth meeting, 27. "With new buses starting in other areas," she says, "there were about 140 in October, with 48 people in every bus." She figures the average monthly RTA fare for these riders was $80 so the RTA is probably out "half a million dollars" a month. "The thing just spurted," she says in wonderment.

Passengers on the private lines divide the cost of the bus by the number of passengers and end up paying from $39 to $52 a month. Some of the buses meet at shopping centers, where merchants are happy to let commuters park because they gain an inflow of people to the center twice a day. Other buses pick up passengers at apartment complexes.

JEWELL THOMPSON

"I believe in voluntarism," Thompson says. She has several masters degrees and is currently working on a doctorate in education and is a voluntary coordinator for adult education.

The bus sharing often fosters a sense of community. Bridge clubs have sprung up, and backgammon tournaments help pass the hour-long ride into the city. "Everybody knows everybody's name," says Thompson. "You don't have to worry about going to sleep on the bus and missing your stop. If you leave something on the bus, your purse or something, you know it will be there when you get back." Friday nights, with their heavier traffic, have become times for wine-and-cheese parties on the bus, and a six-month anniversary party is being planned for the commuters and their families.

Recently, when International Harvester laid off some Chicago employees, many of the bus riders found work through the job bank that has been established spontaneously by the passengers. Job openings are disseminated through the buses and sent out with the monthly *Charter Chatter,* the commuter newsletter. Each of the buses provided food packages to needy families during the holidays, and Thompson's own bus has adopted a zoo animal, voluntarily paying for its upkeep. Plans are developing now for a food cooperative.

Thompson named her bus-organizing group the Rational Transportation Alternative. They have T-shirts—and plans to "get the rascals" that let the original RTA get out of hand. "If I can do it for less, RTA can do it for less," exclaims Thompson. "Lots of our riders could afford RTA rates, but—it's just the principle."

Jewell Thompson, a wife and mother, explains that her activism comes from her grandmother, who took care of Jewell and four others and "believed you have to work for whatever you get." She says she is neither liberal nor conservative, but she tends to favor private solutions. "Public schools are not where it's at," she announces unquestioned, "and I resent paying taxes to bad schools and tuition to good ones."

Even Thompson, though, does not seem to grasp the inevitability of bureaucratic blight. One of the goals of the group is to gain subsidies for the private bus lines. She does not have time indefinitely to run a bus line, go to school, organize classes, be with her family, and work, so her desire to get paid staff into the picture is understandable. But like so many people faced with a problem, her reaction this time is to turn to government for help instead of getting rid of the hindrances—the chief one being that the bus companies, who would profit from providing organizational help, are prohibited by regulation from supplying those services that would relieve the volunteers who manage things now.

Still, Jewell Thompson has proved once again that humans find ingenious ways to surmount their problems if they are allowed to. "This is a classic example of what *can* be done," she says—"plus it's very enjoyable." What more can you ask for?

Patrick Cox is a free-lance writer.

Photograph by David Joel

MOVIES

Reviewed by John Hospers

Jane Fonda stars in Rollover; *Henry Fonda in* On Golden Pond.

Rollover

A few years ago Alan Pakula directed Jane Fonda in *Klute,* in which she portrayed a prostitute. Now he has directed her in another film, *Rollover,* in which she is a tycoon of international finance. *Klute* was better.

The story is of considerable interest, however. For one thing, films almost never concern themselves with the activities of the business community, even big business. (*Patterns* is one of the last ones I remember.) For another, it is intellectually challenging, which is rare for films these days. In fact, most members of the audience won't know much about what's going on, especially the information coming out of all those computers, which may help to explain the film's financial failure. The Arabs are the villains, pulling out of unbacked paper money and going for gold, causing paper worldwide to be worthless and thus precipitating worldwide depression and panic. One wonders whether Fonda was aware that she was involved in a plug for the gold standard.

Nevertheless, as financial writer John Pugsley notes (*Common Sense Viewpoint,* Jan. 1982), "the scenario presented in *Rollover* is impossible, not only because the Arabs wouldn't do it, but also because it just wouldn't work. When one depositor wants to take his dollar deposits out of a bank to buy something else, he must give those dollars to whomever he is buying his new asset from. The recipient now owns the dollars and has no choice but to put them right back in an American bank again. Even if the Arabs got out of dollars, someone else, whoever sold them the things they bought, would be in dollars to the same extent. Overall, the banking system would still have the same quantity of dollars."

If one wanted to make a really exciting film about the world of finance, there is a story made to order: the secret caucus of financiers on Jekyll Island, Georgia, in 1911, the aim of which was to form a federal bank, to take over from local banks the right to issue bank notes, and thus to inflate the nation's currency whenever they desired; and of the passage of the Federal Reserve Act in the closing days of the 1913 Congress just as it was disbanding for Christmas and most congressmen didn't even know what they were voting for. That the Fed became an "engine of inflation," as Charles Lindberg, Sr., warned, has been amply confirmed by history. The film would be dramatic, exciting—and true. Does anyone believe that it will ever be made?

On Golden Pond

Memories of the past and prospects for the future at the age of 80 are commingled in *On Golden Pond.* The performance of Henry Fonda as the old curmudgeon with a sharp tongue but a heart of gold is undoubtedly the best of his long career. That of Katharine Hepburn, as his wife, is more standard Hepburn, but no less effective for all that. There are really no other characters that matter. Even daughter Jane Fonda plays an insignificant role, and the part she is called on to play (not her performance) strikes the only false note in the film: that, with such a loving and understanding mother, an intelligent daughter should still feel such resentment for her father and be unable to see through his tough exterior, is very difficult to believe.

The film is full of humor, usually in the form of telling one-liners uttered by Henry Fonda, giving away the picture's origin as a stage play. But the humor is largely a relief from two kinds of tragic (or at any rate "sad-making") situations, which are presented without blunting their force: there is sad nostalgia for the past—marriage, having children, making love—whose joys can never be repeated but only captured in memory, and an even greater sadness involving the future: the inevitability of death and parting, the discomforts of old age, the inability of those who have lived long in wisdom to impart that wisdom to the young, who ignore it. The film pulls out all the stops on these subjects, and there are few dry eyes in the audience by the time it is over.

Critics have called the sentiments expressed in this film a series of tired clichés, and this may be true—what is there about life and love and death that has *not* become a cliché? But in the context of the film, and as voiced by characters with whom we strongly empathize, the lines are effective for all but the most jaded viewers; and though little external action occurs, the scenes are moving and dramatic. And surely *that* is enough. An unblinking look at life and death is rare enough in films these days. Very likely when critics first reviewed Shakespeare's *The Tempest,* they also described it as a series of tired clichés.

John Hospers is a professor of philosophy at the University of Southern California. His book Understanding the Arts *was recently published by Prentice-Hall.*

LANGUAGE

Tongues of Ice

By Richard N. Mitchell

Now when this was noised abroad, the multitude came together, and were confounded, because that every man heard them speak in his own language. And they were all amazed and marvelled. . .

Joachim of Floris turns out to have been right after all, except for what is probably nothing more than a trivial error in orthography. The Age of the Father gave way to the Age of the Son, which has by now succumbed entirely before the prancing parameters of the Age of the Wholly Gauche. And that creepy sound you hear, that whooping whoosh as of a rushing, mighty windbag, signals the escaping gases of the new dispensation. Where once a few spoke a language that everyone could understand, whole multitudes now recite a lingo that no one can understand.

The Conference of Major Superiors of Men is made up of the abbots and provincials of various Roman Catholic religious orders. On February 10, 1981, a day that they might have spent in prayer, the members of its national board met in Milwaukee for an "evaluation of CMSM structures based on the self-studies." Sounds familiar? And that's not all. A certain Sr. Mary Littell—how did *she* get into the act?—was "engaged as facilitator for the day."

Here's how she did it, as reported to the assembled worthies in August. (Yes, even *there* we have a mole):

To facilitate the process, Sr. Mary utilized the Hoover Grid which begins with the recognition of purpose and values, leading to goals, objectives and finally to implementation. The first and most important step is at the myth level where the renewal of ideals, hopes, dreams and traditions takes place. It is the level of identity and purpose for being.

The advantage of this process is that it puts all the elements of an organization not into a flow chart which is static but into the flow of the organization which is constantly changing and dynamic. In the course of the process the board defined the following elements for evaluation:

The tasks of the board membership and the religious communities through them (the major superiors) is one of (1) animating (through clear identification); (2) facilitating (through acting out the goals and objectives); and (3) impacting (through actions on various levels of CMSM).

So now abideth animating, facilitating, and impacting, these three; but the greatest of these is impacting.

You will probably want to practice these virtues. No problem. To animate, just come up with identifications. Be sure they're *clear,* of course. In no time at all, you'll be animating all over to beat the band and ready to facilitate through acting out goals and objectives. Cinchy. And then—on to impacting! Just remember the one, simple secret of impacting. *Action!* Action on *levels. Various* levels.

Where is the Inquisition, now that we need it?

And if you run into any trouble, consult the nearest Hoover Grid. We don't exactly know what that is, of course, but we're willing to bet the renewal of ideals, hopes, dreams, and traditions at the myth level against a wrinkled old Values Perception/Assessment Inventory/Questionnaire that you can find one at your local teacher-training academy.

We know Educanto when we see it, and this report is full of it. It bristles with "linkage," "resourcing" (with "input" from "resource persons"), "networking," "sharing," "cross-cultural communications," and even offers its own bold, innovative thrust in "ad hocracy," which is defined as "creation of task forces for proper resourcing." So where is the Inquisition, now that we need it?

Even the punctuation is typical of a writer who just can't be bothered with the *meaning* of what he writes. There is a difference between "the Hoover Grid which begins with the recognition of purpose" and "the Hoover Grid, which begins with the recognition of purpose." The first, which is what the writer has given us, implies the horrifying existence of *other* Hoover Grids beginning with *other* recognitions. The same confused inattentiveness causes "the myth level where renewal takes place," to be distinguished from the other myth levels; "a flow chart which is static"; and "the flow of the organization which is constantly changing." In *that* one we don't know whether to be confused about the *flow* or the *organization.* Or both. Or neither.

But if *we* are confused, it is because we are paying attention. This kind of language, devised to give the tone of sophisticated substance to the obvious, the empty, and the banal, is always a dreary and disorderly exercise of robot-like *inattentiveness.* The report is exactly one of those "vain repetitions" of the heathen; it neither provides clear knowledge nor fosters finer understanding. Somewhere in the dark labyrinth of doctrinal elaboration, there must be a technical name for this nasty perversion of language and intellect. It's probably something like *Impactio.*

Well, we know in part, and we prophesy in part, and in part we babble, with the tongues neither of men nor of angels, reciting what we have often heard, as blind mouths speak to stopped ears, as no one speaks to no one.

Richard Mitchell is the author of Less Than Words Can Say *and the publisher of the* Underground Grammarian, *from which this column is adapted.*

BOOKS

Love Letter To the IRS

Free Enterprise without Poverty.
By Leonard M. Greene.
New York: Norton. 1981.
191 pp. $12.95.

Reviewed by Joan Kennedy Taylor

With the beginning of a new fiscal year last October, once again politicians, bureaucrats, and the media had focused on the intractable problem of welfare and especially on the dependent class that the government's policies have created. An article by Robert Pear in the *New York Times* on September 26, for instance, quoted the prediction of a Congressional Budget Office analysis "that the Administration proposals might cause one-third of working welfare recipients to leave the labor force": because of new eligibility rules, these recipients would lose more than they could make from jobs.

There have been proposals to require mothers of small children to look for work and proposals to refuse welfare to anyone who owns $1,000 worth of personal property. This book has a more

ambitious proposal, one endorsed by conservative Sen. Barry Goldwater, liberal NAACP Executive Director Benjamin Hooks, and neoconservative Sen. Daniel Patrick Moynihan, who was one of the most active proponents of President Nixon's attempt to institute a guaranteed annual income, the Family Assistance Plan.

In 134 pages of text aimed at the general reader and an almost impenetrable 49-page appendix, "An Analysis of a Taxable Demogrant"—with tables and figures on the expected fiscal impact of his suggestion—Leonard M. Greene proposes a variant on the guaranteed-income idea, which he claims will solve the inherent work disincentives of previous versions. Greene, an economist and mathematician who is the president and founder of the Institute for Socioeconomic Studies, calls his proposal the Graduated Income Supplement. Under the name "Fair Share," it was partially adopted by Sen. George McGovern in his presidential campaign—the suggestion that everyone in the United States be given a $1,000 grant originated with Mr. Greene.

The Graduated Income Supplement, he proposes, would be given to every individual in the country, replacing all welfare benefits, and would be liable to taxation. Thus, it would *encourage* people to work "by allowing money that is earned to serve as a supplement to welfare benefits rather than as an outright replacement for them." It could abolish the existing duality of systems (welfare and free enterprise), eliminate what Martin Anderson calls "the poverty wall" that penalizes a welfare recipient who gets a job, and perhaps even save the taxpayer money.

How would it do all this? By bringing everyone under the munificent, the glorious, the efficient IRS. "Administratively, the Internal Revenue Service could replace the welter of agencies and battalions of bureaucrats now employed in administering income-support programs, especially welfare," Greene writes. "The IRS is today generally considered to be far more efficient than are agencies concerned with the administration of welfare. Each year it processes tens of millions of returns and collects and pays out billions of dollars. Because of the widespread belief in the efficacy of its enforcement system, the United States has one of the most efficient tax-collection systems, based mainly on voluntary action." And, he adds, "Administration by the IRS would be simple. Few changes in existing IRS procedure would be needed. It would have to institute monthly reports and payments for the long-term poor."

It is hard to figure out the basis on which Mr. Greene makes his forecasts. He presents no figures on the numbers of various bureaucrats; and his suggestion is to implement the supplement plan in a gradual way—cash out in-kind programs piecemeal and replace them with, one supposes, small supplements. Yet, he says sweepingly, the plan can be self-financing: "Any additional costs under the Graduated Income Supplement would be offset by the considerable savings that could be realized from the elimination of the welfare bureaucracy and the agencies concerned with making a host of other payments." As the Urban Institute in Washington, D.C., said of the claim that President Carter's welfare reform proposal, Program for Better Jobs and Income, would reduce the number of federal and state welfare personnel, "[T]he basis of this estimate is unknown."

Such is Mr. Greene's admiration for the IRS that he thinks the "most attractive aspect" of the idea of a negative income tax (Milton Friedman's proposal that the most efficient way to disperse welfare funds would be for everyone below a certain income level to receive tax money instead of paying it) is that "it would be integrated into the tax system." His main argument for the supplement seems to be that it would integrate the entire population into the free-enterprise system by making *everyone a taxpayer.* "Use of the same tax rates for the poor that are used for wage earners would provide a universal work incentive. By having one system for all people, we would free the poor from the demoralization that comes with being on the dole." In Greene's view, the present tax rates provide the best of all possible incentive systems:

> *The integration of all income transfers into the tax system will result in the elimination of elements of the current system which discourage work, because it will provide a simple and fair method of reducing payments as income is earned. After all, we attempt to set income tax rates so that they will not destroy incentives among wage earners.*

The book contains some telling examples of welfare inequities and some valuable summaries of the flaws in several other welfare reform plans, as well as historical notes on what went wrong with the McGovern welfare proposals. But little of Greene's information will be new to people who have read Martin Anderson's 1978 book, *Welfare,* a book that Henry Hazlitt—himself no slouch as a critic of the concept—has labeled "the definitive refutation" of the idea of a guaranteed income, and a book that is nowhere mentioned in *Free Enterprise without Poverty.* And Greene's uncritical acceptance of the present policies and procedures of the IRS is not only objectionable on moral and civil-liberties grounds, but even on the ground of accuracy.

Free Enterprise without Poverty is promoting the message that our tax system itself can be a welfare reform plan, a message that apparently is impressing some of those interested in the politics of welfare reform. Martin Anderson, now an advisor to President Reagan, had something to say about that in *Welfare,* too. He pointed out that the marginal tax rates on earned income today, because of the combinations of exemptions, multiple tax liabilities, deductions, and tax credits, "has been so distorted that a graph of the marginal tax rates looks more like a side view of a roller coaster than a professional chart. If the marginal tax rate structure that results from the interaction of all the deductions, exemptions, and special credits were spelled out as one comprehensive reform plan," Anderson concluded, "it would be dismissed as self-evident nonsense." Apparently he overestimated American politicians.

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A Hard Pill to Swallow

Taking Your Medicine: Drug Regulation in the United States.
By Peter Temin.
Cambridge: Harvard University Press. 1980. 281 pp. $18.95.

Reviewed by H. E. Frech III

This tremendously valuable book clearly presents the distressing history of US drug regulation. It is must reading for those interested in health care or the role of government regulation. Although the history and interpretation are extremely informative and well done, I am not so enthusiastic for the meta-theory of human behavior presented in the book, even though some of

the behavioral and institutional classifications are useful. Temin's own policy proposals are provided little space and less emphasis. He favors very slight movement in the direction of freer drug markets, allowing more consumer and physician choice.

The book contains a wealth of historical and interpretative materials, ranging from the epidemiology of drug risk to the bizarre legislative history of the key Food and Drug Administration legislation and the economic literature on the 1962 FDA amendments. This diverse material is shown to be important to understand drug regulation. Further, Temin handles this complex material masterfully.

Temin shows that federal drug regulation has been persistently based on the elitist assumption that consumers cannot choose drugs for themselves. Since 1962 this assumption has been extended to physicians, as well. Government "aid" is required. He shows that the regulators have aggressively promoted this view and the rules to enforce it. They have shaped legislation to give themselves the most possible power. In particular, the regulators have repeatedly managed to harness public outcries to achieve their own agenda of tightening government control over drugs, in spite of the lack of connection between the public's concern and regulators' goals.

The most fascinating example was the creation of the now crucial distinction between prescription and nonprescription drugs, coming almost as an afterthought and achieved by administrative rule making in the wake of the 1938 legislation. (The legislation itself was irrelevant to the drug disaster that spawned it.) The rule created almost no controversy. The FDA apparently thought that it would apply only to a very small category of drugs that it believed were too potent to allow in over-the-counter sale but not too dangerous to be used with benefit. Thus, the assumption that doctors know what is good for us was casually introduced for a minor number of drugs. The therapeutic revolution since World War II has expanded this minor category into the major category of useful drugs.

Temin shows very convincingly that doctors do not act as well-informed purchasing agents, carefully balancing risks and benefits for their drug-using consumers. Further, he demonstrates in graphic detail that the necessary information on the comparative risks and usefulness of drugs simply does not exist for most drug products and that, even where it does, the nonscientific (particularly, nonstatistical) training of physicians does not prepare them to evaluate it. Further, the treatment of drug risk in the medical literature is shown to be almost unbelievably sloppy and casual. For example, the small risk of blood disease from chloramphenicol receives a great deal of attention, while the similar risk of allergic reaction to penicillin is only mentioned in passing.

As Temin points out, the FDA's drive to control which drugs may get into the control of doctors is based on an analysis similar to the above. The very difficulty of physician choice of drugs, however, has some very damaging implications for the drug regulators' case.

First, the information on which to base a judgment of the relative benefits and costs of drugs, especially the formal evidence generated by experiments, is very poor. The FDA itself must rely on extremely poor information, so that its judgments are very likely to be poor. Surely the case for FDA control should depend on the quality of information available to the regulators being superior to that available to consumers or physicians. For the most part, Temin shows this to be untrue; yet he fails to draw the natural implication that this lack of knowledge undermines the most fundamental argument for government intervention in the drug market.

Second, while the FDA has moved since 1962 to limit doctors' freedom to choose drugs, the cornerstone of official regulatory policy is to transfer the responsibility of choosing drugs from consumers to physicians. (Temin gives this less attention—probably because the slowdown of new drug development and marketing due to the 1962 FDA amendments has received most of the attention of economists and physician-regulation critics.) Indeed, the vast majority of useful drugs are allowed on the market only under physician control. In fact, however, doctors do not scientifically evaluate the drugs but rather make choices based on customary use. And since the case for transferring consumer choice to physicians must rest on the superior knowledge of physicians, this argument appears to crumble. After all, consumers can perfectly well follow customs, as transmitted by pharmacists, physicians, and other consumers. Who needs a doctor for that?

In view of Temin's documentation of the outrageous usurpation of consumer choice by the drug regulators over the years and the laughably slim scientific basis for it, most readers will be shocked to find Temin's policy proposals so tame. He would create a new category of drugs conditionally released (before all information is in to the FDA) in combination with a recertification test system to be sure that doctors have some minimum drug knowledge. Oh, well, Doctor Temin's diagnosis is so well-done that he may be cheerfully forgiven for prescribing a therapy that seems too mild.

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Foreign Folly

Aid as Obstacle.
By Frances Moore Lappé, Joseph Collins, and David Kinley.
San Francisco: Institute for Food and Development Policy. 1980.
189 pp. $4.95.

Reviewed by Christine M. Dorffi

Surprise! The quite liberal authors of this book have come to the reluctant conclusion that foreign aid, of which the US government disbursed over $8 billion in 1980, "fails to help the poor because it is *of necessity* based on one fundamental fallacy: that aid can reach the powerless even though channeled through the powerful. . . . In fact, the influx of such outside resources into those countries where economic control is concentrated in the hands of a few bolsters the local, national and international elites whose stranglehold over land and other productive resources generates poverty and hunger in the first place. Instead of helping, we *hurt* the dispossessed majority."

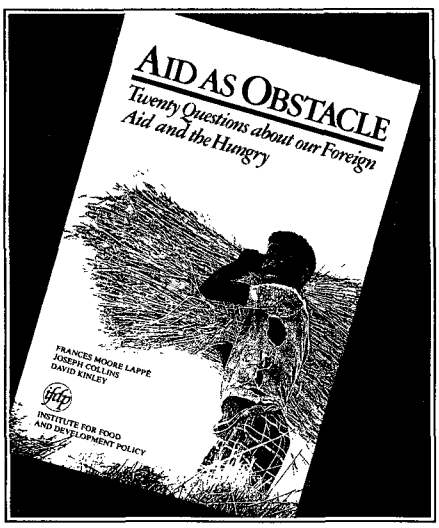
Could even Murray Rothbard have put that better? But the idea of foreign aid is a fiction that most Americans are reluctant to give up.

The poverty of nations is not a cosmic joke; it is rooted in some cause. Often, that cause is a combination of national character, foreign domination and distortion, and a ghoulish politico-economic system. So the countries with the worst of these qualities are often the poorest, and the poorest countries are those most eligible for foreign aid—like Egypt, the Philippines, Mexico, Greece, and Pakistan. Isn't it ironic that the top-ten list of nations receiving US aid contains some of the world's most militaristic and socialistic governments? It makes one

wonder about the sanity of US policymakers, who pay lip service to free enterprise and democracy while handing out dollars to bureaucrats contemptuous of such quaint notions in their homelands.

One's heart does ache to see pictures of starving children. But giving money to such dictators as Marcos of the Philippines will not allow those kids to eat better. What it will do is solidify his position of power. It's not fair; it angers one; but burying centuries-old problems in layers of greenbacks will not magically erase them, particularly when many of those problems were caused in the first place by invaders placing selected groups into positions of power.

There is also the moral question of


AID AS OBSTACLE
Twenty Questions about our Foreign Aid and the Hungry
FRANCES MOORE LAPPÉ
JOSEPH COLLINS
DAVID KINLEY
INSTITUTE FOR FOOD AND DEVELOPMENT POLICY

whether it is right for government leaders to mortgage their citizens' future earnings to pay back aid loans. Take, for instance, the plight of some 10,000 Kalinga farmers (a Philippine mountain tribe in northern Luzon), who are being "persuaded" to leave their fields so that a World Bank-funded hydropower project can be raised. Persuasion is taking the form of the 60th Philippine Constabulary Battalion. What chance do the farmers have against such forces? And by 1990, the authors contend, the debt service of underdeveloped countries will consume 90 percent of the loans received.

Another alarming aspect of foreign aid is that its administrators are obviously no fans of Adam Smith. The International Monetary Fund, the authors report, does not approve loans to overextended governments unless they agree to, among other things, introduce wage controls and raise interest rates. Another aid agency, the Export-Import Bank, makes loans to less-developed countries to buy US products. The US Treasury then guarantees the loans benefiting such multinationals as Boeing, General Electric, and Chrysler.

The book itself is cleverly designed as a series of lengthy answers to what the authors perceive to be the 20 most likely questions about foreign aid. They respond to potential criticism of their stance, too. Some of the questions are:

Doesn't US aid have a moderating influence on repressive foreign governments? What happens to our food aid when it reaches a country where the majority of people are hungry? Aren't you arguing a chancy and cruel proposition that even though an aid cut-off might hurt some people today it is necessary so that structural changes can, in the longer run, eradicate hunger?

Particularly useful is a list at the back of the book of all the major aid establishments; reading that section first helps with the rest.

Interestingly, question 19—"Is nongovernmental private aid the solution?"—points up the advantages and disadvantages of nongovernmental aid; or rather, it points out the potential advantages that most nongovernmental agencies, alas, ignore. Nongovernmental agencies have the option of working directly with the needy, without government; "Nonetheless, the majority of voluntary agencies, especially the largest, seem to opt to collaborate directly with foreign governments." Nongovernmental agencies need not reflect the official US government policies; "Unfortunately, many...have become heavily dependent on US government monies, making them increasingly indistinguishable from agents of the US government." One option that seems alive and well is that the smaller private agencies are less enchanted with bureaucracy and are therefore willing to work on small-budget projects, which seem to be the more successful type of aid.

Question 20—"What...is the appropriate response of those who want to help the hungry overseas?"—is more disturbing. The one irritating aspect of this book is that its authors hold that view of human society that Jane Fonda once summed up in an interview: "If you alter social institutions and social priorities, you begin to change people's basic natures." Thus, the authors blame today's "market" system for the state of the world. They recommend instead that "the majority of people...participate in deciding how the society's resources are to be used and for whose gain."

Having said that, I should also point out that one most refreshing aspect of this work is that the authors allow their indignation, their concern, and their intense activism to shine through the cut-and-dried facts and figures. They have a vision of a hungerless world, and whatever the merits of that position, they are able to make the reader angry about the status quo, angry at the way governments play with the lives of individuals.

Christine M. Dorffi is a free-lance writer. She spent the first 22 years of her life in the Philippines.

Wrong about Rights

Basic Rights.
By Henry Shue.
Princeton: Princeton University Press. 1980. 226 pp. $17.50/$4.95.

Reviewed by Eric Mack

This is a dreadful little book that marvelously represents a large segment of the philosophical Zeitgeist. It even more marvelously illustrates the intellectual corruption present in many philosophically oriented and university-centered public policy institutes and in the foundations that fund them. Henry Shue is one of the permanent staff at the University of Maryland's Center for Philosophy and Public Policy. The foreword informs us that this center is supported by the Rockefeller Brothers Fund and that this particular monograph was partially supported by the Ford Foundation and "grew out of the Center's work on human rights and foreign policy." Some work!

Shue is disturbed by the State Department's insistence that so-called political and civil rights, such as voting rights, are more basic than so-called economic rights, such as a right to a minimum income. In particular, Shue sets out to show that the right to subsistence—the right to "unpolluted air, unpolluted water, adequate food, adequate clothing, adequate shelter, and minimal preventive public health care"—is a basic right. The other central basic right, according to Shue, is the right to security, that is, the right not to be subject to murder, torture, mayhem, rape, or assault.

The argument that Shue presents for the existence of these and other basic rights would earn him not much more than a C in any duly taught political philosophy course. We are simply told

that *if* people have rights to anything, they have rights to security because security is an essential ingredient in the enjoyment of any condition. Shue's attitude seems to be that the fact that people have deep interests in certain conditions proves that others must provide them with those conditions. He builds into the very definition of a right the idea that others must provide one with the enjoyment of that right. So my right not to be murdered by you entails not only a duty on your part not to murder me but also a duty on your part to see to it that third parties do not murder me.

Although *Basic Rights* purports to focus on foreign policy implications, Shue never notices the radically interventionist implications of this right to security, namely, that we have a duty to defend everyone everywhere and that failure to defend anyone is morally equivalent to attacking that party. Shue's crucial argument for the right to subsistence—the right he is most interested in—is that subsistence is just as basic to the satisfaction of people's other rights (whatever they are) as is security. Shue rejects the objection that such subsistence rights place positive burdens on all others by pointing out that, as he construes them, so do security rights.

To show that he is no crazed Marxist indifferent to political and civil rights, Shue insists that some of *these* are basic too. The main one is a right to political participation. Whatever such participation amounts to, Shue is certain that it is necessary to guarantee the provision of security and subsistence as rights. The last (and least) basic right mentioned is the promising-sounding right to freedom of physical movement. But Shue is careful to ensure that this right does *not* preclude conscription or systematic governmental controls on immigration or emigration. Presumably, for Shue, conscription also does not violate anyone's basic right to security.

The author combines this philosophical arsenal with highly dubious economic analysis. He provides the hypothetical example of a relatively prosperous Third World peasant who is induced to switch from black-bean farming for local consumption to flower farming for export. The peasant is also induced to purchase labor-saving equipment. For Shue, the consequences of this typical, unregulated, economic activity would be that the local price of black beans soars, unemployment increases, and malnutrition ensues. This is supposed to illustrate, on the micro level, how free markets lead to the violation of subsistence rights.

Characteristically, Shue does not wonder about, for example, what effect the soaring bean price has on production decisions, what happens to the peasant's extra income, or what additional jobs come into existence in flower transportation or equipment production. Though market innovations *can* be disruptive—and harmfully so—Shue fails to recognize that the prospects for individuals born into the poverty of repressive societies are more likely to be enhanced by a general commitment to freedom from government and to a genuinely free market than by governmental social and economic programs and institutions.

The argument would earn him not much more than a C.

On the macro level, Shue seems inclined toward extensive State (or international) control of economic affairs. What exactly he would endorse is unclear. He recognizes that in countries characterized by mass poverty, the governments have been systematically involved in managing the economy. And he recognizes that, politically, these countries are typically despotic. But he never imagines that the association of mass poverty and despotism with political control of the economy is anything but accidental. Shue's policy position seems to be that all would work out better if only the truly right-minded people could ascend to the power now evilly exercised by dictators and transnational corporations.

It should be noted that some realism does break through within Shue's discussion of recommendations for the present. He realizes that current US economic (and military) aid to most countries does not serve the subsistence or security of the people in those countries. Rather, such aid tends to reinforce the control of brutal regimes. So he recommends the cessation of such aid—until it becomes possible for the US government to transfer wealth successfully via new, farsighted, benevolent rulers. Shue has a long wait.

Eric Mack is a profesor of philosophy at Tulane University and a REASON *contributing editor.*

Medical Mystery

The California Coven Project.
By Bob Stickgold.
New York: Ballantine Books. 1981.
280 pp. $2.50.

Reviewed by Roger M. Firestone

This fast-reading novel takes a scalpel to the State-licensed medical monopoly, while simultaneously treating a number of feminist issues in a warm and sympathetic way. Science fiction, written by a scientist, provides the ideal framework for an enjoyable treatment of the subject.

Maggie Stone, a registered nurse, is practicing as a midwife in the northern California of about 1990. It is a world not so different from ours: energy is a little scarcer (and rationed), and local pay phone calls are $3. The biggest changes are the ubiquity of home computers and terminals, together with access to public data bases and the emergence of bacterial strains that are ultraresistant to antibiotics. It is the latter that has made hospital delivery so risky that physicians have reluctantly allowed the legalization of midwifery.

Loath to relinquish control of an aspect of medicine, however, the state medical association is attempting to require the use of fetal monitors at all births, despite the lack of proven benefits and some clear risks. The dispute fractures the California Midwives Association; Maggie and her friends form a splinter group, and they are threatened with loss of their licenses for rejecting "standard practices" of the medical community.

At the same time, Maggie, driven to desperate measures by her mother's terminal cancer, turns to research in folk medicine. And she finds a folk remedy that works. Nobel Prize material? Not necessarily, for how can she make her discovery public? Maggie has no doctorate, no professorship, no government grant, no position at a prestigious research institution, and no explanation for how or why her cure works. Moreover, if she goes public, not only does she risk disbelief and ridicule; she may also be prosecuted for practicing medicine without a license, which is a felony.

Maggie and a few of her friends attempt a clandestine research study, the California Coven Project. But word leaks out. Since the experimenters are also members of the splinter Natural Midwives Association, this may turn the

state legislature against them and cost them their licenses. Worse yet, some of the cancer patients are dying, casting doubt on the "100 percent cure." Maggie and her daughter go underground, and the last half of the book is spent resolving the situations. Much of the action takes place in the courtroom and legislative hearings.

Stickgold is a research physiologist, and he has researched this book rather well. Besides being fun to read, it is a clear exposition of the folly of establishing a State-licensed orthodoxy. Have we already overlooked the cancer cure because it didn't come from the National Institutes of Health, the University of California at Berkeley, or the Sloan-Kettering Institute? It is well known that antibiotic resistance is due to the overprescription of antibiotics and that the rate of Caesarean-section births has been increasing significantly. More medicine means more profit—especially when the patient has no alternative to the medical monopoly. The book promises to bring licensing issues to the attention of a mass-market audience.

The California Coven Project also demonstrates that a man can write a book about women's issues with understanding and sympathy. In our polarized times, that is a significant accomplishment.

Roger M. Firestone holds a Ph.D. in computer science and works for a major computer manufacturer.

LETTERS

(Continued from p. 9)

tion for the lay person and is another reason why your coverage of these topics is valuable.

Roberta Weithman
Toledo, OH

Salvadorean Riposte

I have followed with some dismay the letters to the editor responding to Mr. Poole's editorial on El Salvador ("Facing Reality in Latin America," May). You should be aware that the only thing phony about the State Department's white paper on El Salvador was not in the few pieces of shaky evidence presented but in the fact that the department had *massive additional* conclusive evidence provided by both private and public Salvadorean sources on Soviet, Cuban, Nicaraguan, Red Chinese, and Socialist International involvement in directly aiding the guerrillas, most of whom are of foreign origin. This evidence includes hundreds of captured weapons of Communist manufacture or recent vintage, Red Chinese rockets and explosive charges, photographs of Nicaraguan aircraft unloading supplies in El Salvador, plus untold numbers of eyewitnesses and Communist defectors detailing all of their foreign training and experiences. For reasons known only to Secy. of State Haig and others in the State Department, they chose to forgo these heavy testaments in favor of a few captured documents, easily discredited.

For those of us who work or live in El Salvador, the questions bantered about in America about potential foreign involvement aren't even subjects of debate. They are facts....

Your readers may also be interested to know that the present Salvadorean president-dictator, José Napolean Duarte, is not a rightist in any sense of the word. He has a long and easily detailed Marxist background, including exile for his role in an abortive Communist coup with fellow Marxist Ungo, now leader of the Communist guerrillas. Both are presently trying to outdo the other in seeing who can implant upon the helpless populace the most economic and political devastation. Even if the country survives the guerrilla attacks, it will never survive the economic destruction of Duarte's US State Department-mandated agrarian and banking "reforms."

Joel M. Skousen
Hood River, OR

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Orange Arguments

McMenamin and Connelly ("How Sunkist Put the Squeeze on the FTC," Nov.) present an interesting account of legislative maneuvering to use the political process to personal advantage. However, the thrust of their attack is misdirected at Sunkist and other agriculture cooperatives as if there were something anticompetitive about them per se.

Take each of the FTC's objections to Sunkist, which McMenamin and Connelly cite uncritically: first, "exclusive dealing" with 51 packing houses whom

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Sunkist insisted could not pack fruit for its competitors; second, withholding supplies to raise prices; third, refusing to sell its products to competing processors and marketers.

The contention that any of the above practices should be illegal can be rejected on grounds both of economic theory and of political liberty. Economic theory would predict that attempts to monopolize by exclusive dealing would simply result in competing packing houses, processors, etc., springing up to serve competing growers. Indeed, many, if not most, businesses are integrated over more than one production stage. McDonald's sells only to its franchises, Maxwell House packs its own coffee, etc. Furthermore, if either tried to raise prices by withholding its products, the market would soon be seized by competitors. And political liberty is, by definition, consistent with freely negotiated contracts—which is all the FTC is complaining about.

The question of monopoly arises *not* in any of the practices cited in the FTC complaint but from the legal privileges attached to cooperatives in the Agricultural Adjustment Act and similar legislation that requires licenses for packers, allots co-op growing areas, hikes prices, and has had the effect of ossifying much of agriculture in a marketing system appropriate to the era prior to refrigeration and the internal combustion engine.

Sunkist's political lobbying is simply a rational response to the unpleasant but nonetheless real state of affairs that government has the power to distribute an enormous amount of largesse to private groups who know how to lobby. . . .

Andrew Chalk
Clayton, MO

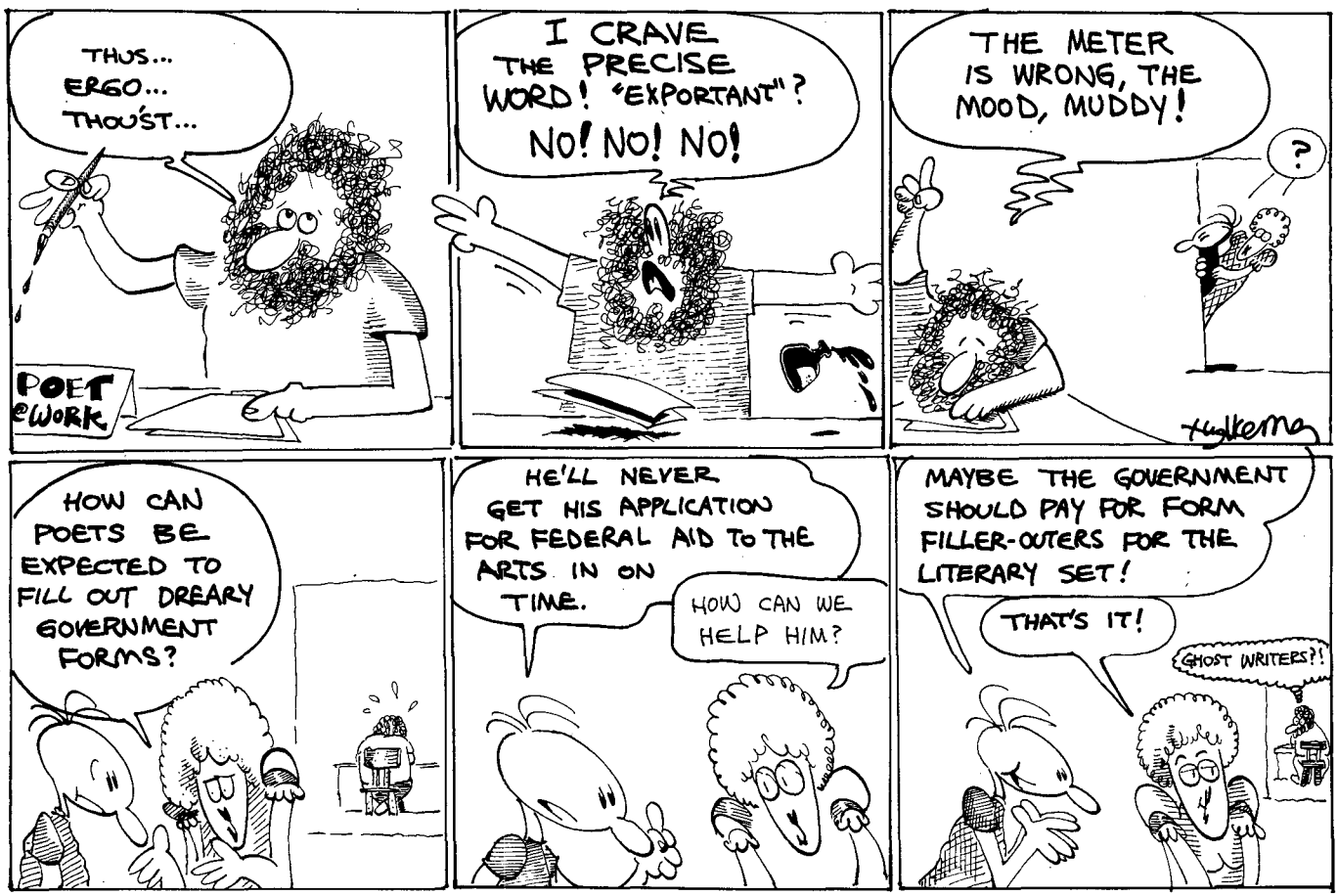
Mr. McMenamin replies: There *is* something anticompetitive about agricultural cooperatives. For one thing, the practices cited by the FTC in its Sunkist complaint were and are effective in maintaining Sunkist's monopoly position precisely because of the artificial barriers to entry erected by the government's regulation of citrus-fruit marketing. The practices help plug any loopholes in the regulatory scheme through which competition might rear its ugly head.

More important, the history of modern agricultural cooperatives coincides precisely with the growth in government regulation of agriculture. Far from being innocent victims "rational[ly] respon[ding]" to the evils of big government, agricultural cooperatives are the aggressors who lobbied for and helped initiate and maintain government's pervasive role in farming, to the ultimate detriment of all consumers.

Finally, we were hardly uncritical of the FTC in the article—for example: "the good it does by accident is more than offset by the harm it does intentionally." One good thing the FTC did do, however, was its 1976 study of all USDA Agricultural Marketing Orders and their anti-consumer effects. And it was because of this that the FTC became a target for Sunkist and its agricultural co-op allies.

rudebarbs

RANDALL K. HYLKEMA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ERGO...
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POET @ WORK
I CRAVE THE PRECISE WORD! "EXPORTANT"?
NO! NO! NO!
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?
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GHOST WRITERS?!

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HEALTH & WELFARE

(Continued from p. 46)

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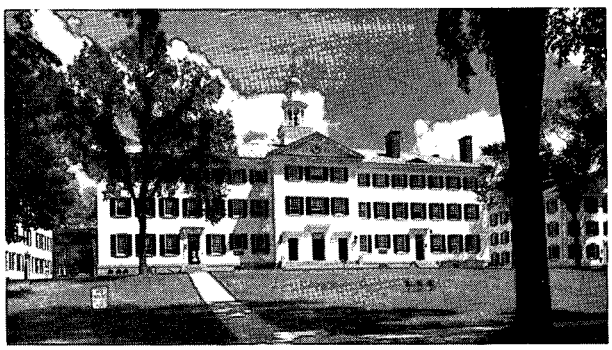

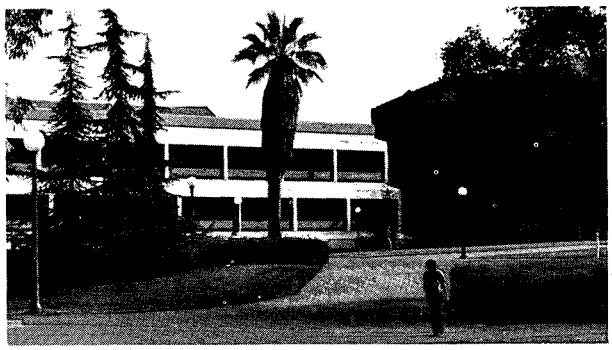

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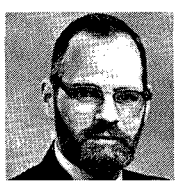

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